Applied Science & Technology Index

1963

Abbreviations of Periodicals Indexed

For full information consult pages ix to xii

AIAA J—AIAA Journal
A I Ch E J—Journal of the American Institute of Chemical Engineers
ARS J—ARS Journal
ASHRAE J—ASHRAE Journal
A S M E Trans—Transactions of the American Society of Mechanical Engineers
Aerospace Eng—Aerospace Engineering
Air Cond Heat & Ven—Air Conditioning Heating and Ventilating
Aircraft Eng—Aircraft Engineering
Am Assn Pet Geologists Bul—Bulletin of the American Association of Petroleum Geologists
Am Cer Soc Bul—Bulletin of the American Ceramic Society
Am Cer Soc J—Journal of the American Ceramic Society
Am Chem Soc J—Journal of the American Chemical Society
Am Concrete Inst J—Journal of the American Concrete Institute
Am Dyestuff Rep—American Dyestuff Reporter
Am Gas Assn Mo—American Gas Association Monthly
Am Inst Chem Eng J. See A I Ch E J
Am J Clinical Nutrition—American Journal of Clinical Nutrition
Am J Phys—American Journal of Physics
Am J Pub Health—American Journal of Public Health and the Nation's Health
Am Mach/Metalworking Manuf—American Machinist/Metalworking Manufacturing
Am Mineralogist—American Mineralogist, Journal of the Mineralogical Society of America
Am Oil Chem Soc J—Journal of the American Oil Chemists' Society
Am Perfumer—American Perfumer and Cosmetics
Am Rocket Soc J. See ARS J
Am Scientist—American Scientist
Am Soc C E Proc—Proceedings of the American Society of Civil Engineers
Am Soc Heat Refrig & Air-Cond Eng J. See ASHRAE J
Am Soc Mech Eng Trans. See A S M E Trans
Am Water Works Assn J—Journal American Water Works Association
Anal Chem—Analytical Chemistry
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Arch Rec—Architectural Record
Archives Environmental Health—Archives of Environmental Health
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Automotive Ind—Automotive Industries

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Bell System Tech J—Bell System Technical Journal
Brit Inst Radio Eng J—Journal of the British Institution of Radio Engineers
Brit Plastics—British Plastics

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Can J Chem Eng—Canadian Journal of Chemical Engineering
Can Min & Met Bul—Canadian Mining and Metallurgical Bulletin
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Chem & Eng N—Chemical and Engineering News
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Chem Eng Prog—Chemical Engineering Progress
Civil Eng—Civil Engineering, the Magazine of Engineered Construction
Coal Age—Coal Age
Com & Electronics—Communication and Electronics
Combustion—Combustion
Comp Air Mag—Compressed Air Magazine
Control Eng—Control Engineering
Corrosion—Corrosion

Diesel Equip Supt—Diesel Equipment Superintendent
Dom Eng—Domestic Engineering
Drug & Cosmetic Ind—Drug and Cosmetic Industry

Econ Geol—Economic Geology and the Bulletin of the Society of Economic Geologists
Elec Com—Electrical Communication
Elec Constr & Maint—Electrical Construction and Maintenance
Elec Eng—Electrical Engineering
Elec World—Electrical World
Electro-Tech—Electro-Technology
Electrochem Soc J—Journal of the Electrochemical Society
Electronic Eng—Electronic Engineering
Electronic Ind—Electronic Industries
Electronic Tech—Electronic Technology
Electronics—Electronics
Eng & Instrumentation. See J Res Nat Bur Stand
Eng & Min J—Engineering and Mining Journal
Eng J—Engineering Journal
Eng N—Engineering News-Record
Engineer—Engineer
Engineering—Engineering

Food Eng—Food Engineering
Food Tech—Food Technology
Foundry—Foundry
Franklin Inst J—Journal of the Franklin Institute
Fundamentals. See Ind & Eng Chem

Gas—Gas
Gas Age—Gas Age
Geol Soc Bul—Bulletin of the Geological Society of America
Geophysics—Geophysics
Glass Ind—Glass Industry

Heating-Piping—Heating, Piping and Air Conditioning
Hydraulics & Pneumatics—Hydraulics and Pneumatics
Hydrocarbon Process & Pet Refiner—Hydrocarbon Processing and Petroleum Refiner

IEEE Proc—Proceedings of the IEEE
IEEE Trans Applications & Ind—IEEE Transactions on Applications and Industry
IEEE Trans Com & Electronics—IEEE Transactions on Communication and Electronics
IEEE Trans Power Apparatus & Systems—IEEE Transactions on Power Apparatus and Systems
I S A J—ISA Journal
Illum Eng—Illuminating Engineering, The Journal of the Illuminating Engineering Society

ABBREVIATIONS OF PERIODICALS INDEXED

Ind & Eng Chem—Industrial and Engineering Chemistry
Ind Chem—Industrial Chemist
Ind Electronics—Industrial Electronics
Ind Finishing—Industrial Finishing
Ind Med—Industrial Medicine and Surgery
Ind Phot—Industrial Photography
Ind Quality Control—Industrial Quality Control
Inland Ptr/Am Lithogr—Inland Printer/American Lithographer
Inst E E Proc—Proceedings of the Institution of Electrical Engineers
Inst Mech Eng Proc—Proceedings of the Institution of Mechanical Engineers
Inst Metals J—Journal of the Institute of Metals
Inst Pet J—Journal of the Institute of Petroleum
Inst Radio Eng Proc—Proceedings of the Institute of Radio Engineers
Instrument Soc Am J. See I S A J
Instruments & Control Systems—Instruments and Control Systems
Iron Age—Iron Age
Iron & Steel Eng—Iron and Steel Engineer
Iron & Steel Inst J—Journal of the Iron and Steel Institute

J Aerospace Sci—Journal of the Aerospace Sciences
J Agri & Food Chem—Journal of Agricultural and Food Chemistry
J Ap Chem—Journal of Applied Chemistry
J Ap Mech. See A S M E Trans
J Ap Phys—Journal of Applied Physics
J Basic Eng. See A S M E Trans
J Colloid Sci—Journal of Colloid Science
J Eng Ind. See A S M E Trans
J Eng Power. See A S M E Trans
J Geol—Journal of Geology
J Heat Transfer. See A S M E Trans
J Math & Phys—Journal of Mathematics and Physics
J Metals—Journal of Metals
J Nutrition—Journal of Nutrition
J Pet Tech—Journal of Petroleum Technology
J Res Nat Bur Stand—Journal of Research of the National Bureau of Standards
J Sci Instr—Journal of Scientific Instruments

Light Metal Age—Light Metal Age
Lub Eng—Lubrication Engineering

Mach—Machinery
Machine Design—Machine Design
Mag of Stand—Magazine of Standards
Manuf Chem—Manufacturing Chemist
Marine Eng/Log—Marine Engineering/Log
Materials in Design Eng—Materials in Design Engineering
Materials Res & Stand—Materials Research and Standards
Math & Math Phys. See J Res Nat Bur Stand
Mech Eng—Mechanical Engineering
Metal Finishing—Metal Finishing
Metal Prog—Metal Progress
Metallurgia—Metallurgia, the British Journal of Metals
Mill & Factory—Mill & Factory
Min Cong J—Mining Congress Journal
Min Eng—Mining Engineering
Mod Materials Handling—Modern Materials Handling
Mod Metals—Modern Metals
Mod Phot—Modern Photography
Mod Plastics—Modern Plastics
Mod Textiles Mag—Modern Textiles Magazine

Naval Eng. J—Naval Engineers Journal
Nucleonics—Nucleonics

Oil & Gas J—Oil and Gas Journal
Op Res—Operations Research

Paper Ind—Paper Industry
Pet Management—Petroleum Management
Phys & Chem. See J Res Nat Bur Stand
Phys Today—Physics Today
Pit & Quarry—Pit and Quarry
Plant Eng—Plant Engineering
Plastics Tech—Plastics Technology
Plastics World—Plastics World
Plating—Plating
Power—Power
Power Apparatus & Systems—Power Apparatus and Systems
Power Eng—Power Engineering
Proc Design. See Ind & Eng Chem
Product Eng—Product Engineering
Product Res & Develop. See Ind & Eng Chem
Prog Arch—Progressive Architecture
Pub Roads—Public Roads
Pub Works—Public Works

Q S T—QST

RCA R—RCA Review
R Sci Instr—Review of Scientific Instruments
Radio & Electronic Eng—Radio and Electronic Engineer
Radio Corp Am R. See RCA R
Radio-Electronics—Radio-Electronics
Radio Propagation. See J Res Nat Bur Stand
Res/Develop—Research/Development
Research—Research. Applied in Industry
Roads & Sts—Roads and Streets
Rock Prod—Rock Products
Roy Aeronautical Soc J—Journal of the Royal Aeronautical Society
Rubber Age—Rubber Age
Rubber Chem & Tech—Rubber Chemistry and Technology
Rubber World—Rubber World

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Safety Maint—Safety Maintenance
Sci Am—Scientific American
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Soc Automotive Eng J. See S A E J
Soc Dyers & Col J—Journal of the Society of Dyers and Colourists
Soc Motion Picture & Tv Eng J. See SMPTE J
Sound—Sound; Its Uses and Control
Space/Aeronautics—Space/Aeronautics
Steel—Steel

Tappi—Tappi
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Textile Ind—Textile Industries
Textile Res J—Textile Research Journal
Textile World—Textile World
Tool & Manuf Eng—Tool and Manufacturing Engineer
Traffic Q—Traffic Quarterly

WPCF J—Journal of the Water Pollution Control Federation
Water & Sewage Works—Water & Sewage Works
Water Works Eng—Water Works Engineering
Welding Eng—Welding Engineer
Welding J—Welding Journal
Westinghouse Eng—Westinghouse Engineer
Wire & Wire Prod—Wire and Wire Products
Wireless World—Wireless World

APPLIED SCIENCE & TECHNOLOGY INDEX

1963

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1963

EDITED BY
ELSA TOOM

INDEXERS
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E. T.

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Q S T—QST

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Westinghouse Eng—Westinghouse Engineer
Wire & Wire Prod—Wire and Wire Products
Wireless World—Wireless World

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AIAA Journal. $30 m American Institute of Aeronautics and Astronautics, Inc, 1290 Avenue of the Americas, New York

Combining ARS Journal and Journal of the Aerospace Sciences; changed January, 1963

A I Ch E Journal. $25 bi-m American Institute of Chemical Engineers, 345 E 47th St, New York 17

ARS Journal. $18 m American Rocket Society, Inc, and American Interplanetary Society, 500 Fifth Av, New York 36

Combined with Journal of the Aerospace Sciences with new name, AIAA Journal; changed January, 1963

ASHRAE Journal. $5 m American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc, 345 E 47th St, New York 17

ASME Transactions. $15 American society of Mechanical Engineers, 345 E 47th St, New York 17

Published in 5 parts: ser A. Journal of Engineering for Power. q (Ja); ser B. Journal of Engineering for Industry. q (F); ser C. Journal of Heat Transfer. q (F); ser D. Journal of Basic Engineering. q (Mr); ser E. Journal of Applied Mechanics. q (Mr)

$7.50 to members and affiliates

Aerospace Engineering. $10 m Institute of the Aeronautical Sciences, Inc, 2 E 64th St, New York 21

Name changed to Astronautics and Aerospace Engineering February, 1963

Air Conditioning, Heating and Ventilating. $5 m Industrial Press, 93 Worth St, New York 13

Aircraft Engineering. 48s; U.S. $7.50; Canada $7.50 m Bunhill Publications, Ltd, 12 Bloomsbury Square, London, W.C. 1

American Association of Petroleum Geologists Bulletin. $30 m American Association of Petroleum Geologists, Inc, Box 979, Tulsa 1, Okla.

American Ceramic Society Bulletin. $6 m American Ceramic Society, 4055 N High St, Columbus 14, Ohio

American Ceramic Society Journal; Ceramic Abstracts. $15 including Ceramic Bulletin m American Ceramic Society, 4055 N High St, Columbus 14, Ohio

American Chemical Society Journal. $30 s-m American Chemical Society, 1155 16th St, N.W. Washington 6, D.C.

American Concrete Institute Journal. $18 m American Concrete Institute, P.O. Box 4754 Redford Station, Detroit 19, Mich.

American Dyestuff Reporter. $7.50 bi-w Howes Pub. Co. Inc, 44 E 23d St, New York 10

American Gas Association Monthly. $5 m (bi-m Jl-Ag) American Gas Assn. Inc, 605 Third Av, New York 16

American Institute of Chemical Engineers Journal. See A I Ch E Journal

American Journal of Clinical Nutrition. $15 m The American Journal of Clinical Nutrition, Inc, 455 Lexington Av, New York 17

American Journal of Physics. $10 m American Institute of Physics, Inc, 335 E 45th St, New York 17

American Journal of Public Health and the Nation's Health. $15 m American Public Health Association, Inc, 1790 Broadway, New York 19

American Machinist/Metalworking Manufacturing. $3 bi-w McGraw-Hill Pub. Co. Inc, 330 W 42d St, New York 36

American Mineralogist. Journal of the Mineralogical Society of America. bi-m U.S. Geological Survey, Washington 25, D.C.

American Oil Chemists' Society Journal. $8 m American Oil Chemists' Society, 35 E Wacker Drive, Chicago 1

American Perfumer and Cosmetics. $5 m Allured Pub. Corp. 1031 South Blvd, Oak Park, Ill.

October is Documentary Edition. $5

American Rocket Society Journal. See ARS Journal

American Scientist. $3.50 q Sigma Xi, 51 Prospect St, New Haven 11, Conn.

American Society of Civil Engineers Proceedings. m American Society of Civil Engineers, 345 E 47th St, New York 17

American Society of Heating, Refrigerating and Air-Conditioning Engineers Journal. See ASHRAE Journal

American Society of Mechanical Engineers Transactions. See ASME Transactions

American Water Works Association Journal. m American Water Works Assn, Inc, 2 Park Av, New York 16

Analytical Chemistry. $5 m American Chemical Society, 1155 16th St, N.W. Washington 6, D.C.

Applications and Industry. $10 bi-m Institute of Electrical and Elecronics Engineers, Inc, Box A, Lenox Hill Station, New York 21

Name changed to IEEE Transactions on Applications and Industry March, 1963

Architectural Forum. The Magazine of Building. $7 m Time, Inc, 540 N. Michigan Av, Chicago 11, Ill.

Architectural Record. $5.50 m McGraw-Hill, Inc, 330 W 42d St, New York 36

Extra number published in Mid-May

Archives of Environmental Health. $12 m American Medical Association, 535 N Dearborn St, Chicago 10

Association for Computing Machinery Journal. $15 q Association for Computing Machinery, 211 E 43d St, New York 17

Astronautics and Aerospace Engineering. $10 m American Institute of Aeronautics and Astronautics, 500 Fifth Av, New York 36

Formerly Aerospace Engineering; changed February, 1963

Audio. $5 m Radio Magazines, Inc, 204 Front St, Square Station, New York 10

Audio Engineering Society Journal. $11 q Audio Engineering Society, P.O. Box 383, Madison Square Station, New York 10

Automation; The Magazine for Manufacturing Systems Engineering. $10 m Penton Pub. Co. Penton Bldg, Cleveland 13

Automobile Engineer. £4; U.S. $12; Canada $12 m Iliffe Production Publications, Ltd, Dorset House, Stamford St, London, S.E. 1

Extra number published in May

Automotive Industries. $10 s-m Chilton Co. Chestnut & 56th Sts, Philadelphia 39

Bell Laboratories Record. $2 m Bell Telephone Laboratories, Inc, 463 West St, New York 14

Bell System Technical Journal. $5 bi-m American Telephone and Telegraph Co, 195 Broadway, New York 7

British Institution of Radio Engineers Journal. £5 10s m British Institution of Radio Engineers, 9 Bedford Square, London, W.C. 1

Name changed to Radio and Electronic Engineer January, 1963

British Plastics. £3 10s; U.S. $11.50; Canada $11.50 m Iliffe Industrial Publications, Ltd, Dorset House, Stamford St, London, S.E. 1

Canadian Chemical Processing. $6; U.S. $10 m Southam-Maclean Publications, Ltd, 1450 Don Mills Rd, Don Mills, Ontario, Canada

Canadian Journal of Chemical Engineering. $6; U.S. $8.50 bi-m Chemical Institute of Canada, 48 Rideau St, Ottawa 2, Ont.

Canadian Mining and Metallurgical Bulletin. $10; U.S. $12 m Canadian Institute of Mining and Metallurgy, 906 Drummond Bldg, Montreal, Que.

Ceramic Industry. $5 m Cahners Pub. Co. Inc, 5 So. Wabash Av, Chicago 3

Chemical & Engineering News. $6 w American Chemical Society, 1155 16th St, N.W, Washington 6, D.C.

Chemical Engineering. $3 bi-w McGraw-Hill, Inc, 330 W 42d St, New York 36

Chemical Engineering Progress. $25 m American Institute of Chemical Engineers, 345 E 47th St, New York 17

Chemistry and Industry. £5 w Society of Chemical Industry, 14 Belgrave Square, London, S.W. 1

Civil Engineering, the Magazine of Engineered Construction. $5 m American Society of Civil Engineers, 345 E 47th St, New York 17

Coal Age. $3 m McGraw-Hill, Inc, 330 W 42d St, New York 36

Combustion. $4 m Combustion Pub. Co. Inc, 305 Madison Av, New York 17

Communication and Electronics. $10 bi-m Institute of Electrical and Electronics Engineers, Inc, Box A, Lenox Hill Station, New York 21
Name changed to IEEE Transactions on Communication and Electronics March, 1963

Compressed Air Magazine. $5 m Compressed Air Magazine Co, 942 Memorial Parkway, Phillipsburg, N.J.

Control Engineering. $3 m McGraw-Hill, Inc, 330 W 42d St, New York 36

Corrosion. $10 m National Association of Corrosion Engineers, Inc, 980 M & M Bldg, Houston 2, Tex.

Diesel Equipment Superintendent. $4 m Diesel Publications, Inc, 80 Lincoln Av, Stamford, Conn.

Domestic Engineering. $5 m Medalist Publications Inc, 1801 Prairie Av, Chicago 16

Drug and Cosmetic Industry. $3 m Drug Markets, Inc, 101 W 31st St, New York 1

Economic Geology and the Bulletin of the Society of Economic Geologists. $8.50 s-q Economic Geology Pub. Co. M. M. Leighton. Business Mgr. Urbana, Ill.

Electrical Communication. $2 q International Telephone and Telegraph Corp. 320 Park Av, New York 22

Electrical Construction and Maintenance. $13 m McGraw-Hill, Inc, 330 W 42d St, New York 36
Extra number published in Mid-September

Electrical Engineering. $12 m Institute of Electrical and Electronics Engineers, Box A, Lenox Hill Station, New York 21
Discontinued with the December 1963 number

Electrical World. $8 w McGraw-Hill, Inc, 330 W 42d St, New York 36

Electro-Technology. $15 m Conover-Mast Publications, Inc, 205 E 42d St, New York 17

Electrochemical Society Journal. $24 m Electrochemical Society, 30 E 42d St, New York 17

Electronic Engineering. £1 16s; U.S. $5; Canada $5 m Morgan Brothers, Ltd, 28 Essex St, Strand, London, W.C. 2

Electronic Industries. $10 m Chilton Co. Chestnut & 56th Sts, Philadelphia 39

Electronic Technology. £3 7s; U.S. and Canada $9.50 m Iliffe Electrical Publications Ltd, Dorset House, Stamford St, London, S.E. 1
Name changed to Industrial Electronics October, 1962

Electronics. $6 w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36
Extra number, Buyers' Guide July 25

Engineer. £5 10s; Canadian subs £5 5s w Morgan Brothers, Ltd, 28 Essex St, Strand, London, W.C. 2

Engineering. £5 10s; Canadian subs £5 5s w Engineering Ltd, 36 Bedford St, London, W.C. 2

Engineering and Instrumentation. See Journal of Research of the National Bureau of Standards

Engineering and Mining Journal. $4 m McGraw-Hill, Inc, 330 W 42d St, New York 36

Engineering Journal. $6 m Engineering Institute of Canada, 2050 Mansfield St, Montreal 2, Que.

Engineering News-Record. $6 w McGraw-Hill, Inc, 330 W 42d St, New York 36

Food Engineering. $2 m Chilton Co. Chestnut & 56th Sts, Philadelphia 39

Food Technology. $8.50 m Institute of Food Technologists, 176 West Adams St, Chicago 3

Foundry. $10 m Penton Pub. Co, Penton Bldg, Cleveland 13

Franklin Institute Journal. $20 m Franklin Institute of the State of Pennsylvania, Benjamin Franklin Parkway at 20th St, Philadelphia 3

Fundamentals. See Industrial and Engineering Chemistry

Gas. $15 m Chilton Co, 56th & Chestnut Sts, Philadelphia 39

Gas Age. $5 m Moore Pub. Co, Inc, Ojibway Building, Duluth 2, Minnesota
Changed to monthly beginning October, 1962

Geological Society of America Bulletin. $25 m Geological Society of America, 231 E 46th St, New York

Geophysics. $10 bi-m Society of Exploration Geophysicists, Howard R. Breck, Business Manager, Shell Bldg. Tulsa 19, Okla.

Glass Industry. $6 m The Ogden Group, Reuben H. Donnelley Corp, 466 Lexington Av, New York 17

Heating, Piping and Air Conditioning. $5 m Keeney Pub. Co. 6 N Michigan Av, Chicago 2

Hydraulics and Pneumatics. $8.50 m Industrial Pub. Corp, 812 Huron Rd, Cleveland 15

Hydrocarbon Processing and Petroleum Refiner. $3 m Gulf Pub. Co, P.O. Box 2608, Houston 1, Tex.

IEEE Proceedings. $22 m Institute of Electrical and Electronics Engineers, Inc, Box A, Lenox Hill Station, New York 21
Formerly Institute of Radio Engineers Proceedings; changed January, 1963

IEEE Transactions on Applications and Industry, $17 bi-m Institute of Electrical and Electronics Engineers, Inc, Box A, Lenox Hill Station, New York 21
Formerly Applications and Industry; changed March, 1963

IEEE Transactions on Communication and Electronics. $10 bi-m Institute of Electrical and Electronics Engineers, Inc, Box A, Lenox Hill Station, New York 21
Formerly Communication and Electronics; changed March, 1963

IEEE Transactions on Power Apparatus and Systems. $10 bi-m Institute of Electrical and Electronics Engineers, Inc, Box A, Lenox Hill Station, New York 21
Formerly Power Apparatus and Systems; changed April, 1963

ISA Journal. $4 m Instrument Society of America, Penn-Sheraton Hotel, 530 William Penn Pl, Pittsburgh 19

Illuminating Engineering, the Journal of the Illuminating Engineering Society. $18 m Illuminating Engineering Society, 345 E 47th St, New York 17

Industrial and Engineering Chemistry. m American Chemical Society, 1155 16th St, N.W. Washington 6, D.C.
Sold only in combination with one or more I&EC quarterlies: Process Design and Development (Ja); Fundamentals (F); Product Research and Development (Mr) One quarterly $3; two $5; three $7, Subscriptions must begin with January and end with December.

Industrial Chemist. 50s m Tothill Press, Ltd, 33 Tothill St, Westminster, London, S.W. 1

Industrial Electronics. £3; U.S. and Canada $10 m Iliffe Electrical Publications, Ltd, Dorset House, Stamford St, London, S.E. 1
Formerly Electronic Technology; changed October, 1962

Industrial Finishing. $3 m Practical Publications, Inc, 1142 N. Meridian St, Indianapolis 4

Industrial Medicine and Surgery. $6 m Industrial Medicine Pub. Co, P.O. Box 306, Tamiami Station, Miami 44, Fla.

Industrial Photography. $6 m United Business Publications, Inc, 200 Madison Av, New York 16

Industrial Quality Control. $9 m American Society for Quality Control, Inc, 161 W Wisconsin Av, Milwaukee 3

Inland Printer/American Lithographer. $5 m Maclean-Hunter Pub. Corp. 79 W Monroe St, Chicago 3

Institute of Metals Journal. m Institute of Metals, 17 Belgrave Square, London, S.W. 1

Institute of Petroleum Journal. £6 6s m Institute of Petroleum, 61 New Cavendish St, London, W. 1

Institute of Radio Engineers Proceedings. $18 m Institute of Radio Engineers, Inc, 1 E 79th St, New York 21
Name changed to IEEE Proceedings January, 1963

Institution of Electrical Engineers Proceedings. £10 m The Institution, Savoy Place, London, W.C. 2
Published in 2 parts: pt A. Power Engineering. bi-m (F); pt B. Electronic and Communication Engineering (including Radio Engineering) bi-m (Ja)
Changed to monthly beginning January, 1963

Institution of Mechanical Engineers Proceedings, separate papers Institution of Mechanical Engineers, 1 Birdcage Walk, Westminster, London, S.W. 1

Instrument Society of America Journal. See ISA Journal

Instruments and Control Systems. $4 m Instruments Pub. Co, Inc, 845 Ridge Av, Pittsburgh 12

Iron Age. $25 w Chilton Co, Inc, Chestnut & 56th Sts, Philadelphia 39

Iron and Steel Engineer. $7.50 m Association of Iron and Steel Engineers, 1010 Empire Bldg, Pittsburgh 22

Iron and Steel Institute Journal. £18 m Iron and Steel Institute, 4 Grosvenor Gardens, London, S.W. 1

Journal of Agricultural and Food Chemistry. $20 bi-m American Chemical Society, 1155 16th St. N.W. Washington 6, D.C.

Journal of Applied Chemistry. £15 m Society of Chemical Industry, 14 Belgrave Square, London, S.W. 1

Journal of Applied Mechanics. See ASME Transactions

Journal of Applied Physics. $20 m American Institute of Physics, 335 E 45th St, New York 17

$15 to members and associate members of the American Institute of Physics

Journal of Basic Engineering. See ASME Transactions

Journal of Colloid Science. $28 9 times a yr Academic Press Inc, 111 5th Av, New York 3

Journal of Engineering for Industry. See ASME Transactions

Journal of Engineering for Power. See ASME Transactions

Journal of Geology. $14 bi-m University of Chicago Press, 5750 Ellis Av, Chicago 37

Journal of Heat Transfer. See ASME Transactions

Journal of Mathematics and Physics. $8 q Massachusetts Institute of Technology, Cambridge 39, Mass.

Journal of Metals. $10 m American Institute of Mining, Metallurgical and Petroleum Engineers, Inc, 345 E 47th St, New York 17

Journal of Nutrition. $22.50 m Wistar Institute of Anatomy and Biology, 36th St at Spruce, Philadelphia 4

Journal of Petroleum Technology. $8 m Society of Petroleum Engineers of AIME, 6300 North Central Expressway, Dallas 6

Journal of Research of the National Bureau of Standards. Superintendent of Documents, Washington 25, D.C.

Published in 4 sections: A, Physics and Chemistry. $4 bi-m; B, Mathematics and Mathematical Physics $2.25 q; C, Engineering and Instrumentation $2.25 q; D, Radio Propagation $4 bi-m

Journal of Scientific Instruments. £8 m Institute of Physics and the Physical Society, 47 Belgrave Square, London, S.W. 1

Journal of the Aerospace Sciences. $20 m Institute of the Aeronautical Sciences, Inc, 2 E 64th St, New York 21

Combined with ARS Journal with new name, AIAA Journal; changed January, 1963

Light Metal Age. $6 bi-m Roy Fellom, Jr, 693 Mission St, San Francisco 5

Lubrication Engineering. $6 m American Society of Lubrication Engineers, 838 Busse Highway, Park Ridge, Ill.

Machine Design. $10 bi-w Penton Pub. Co. Penton Bldg, Cleveland 13

Machinery. $10 m Industrial Press, 93 Worth St, New York 13

Magazine of Standards. $7 m American Standards Association, Inc. 10 E 40th St, New York 16

Manufacturing Chemist and Aerosol News. £3; U.S. $9 m Grampian Press, Ltd. The Tower, 229-243 Shepherds Bush Road, Hammersmith, London, W. 6

Marine Engineering/Log. $4 m (s-m in June) Simmons-Boardman Pub. Corp. 30 Church St, New York 7

Materials in Design Engineering. $3 m Reinhold Pub. Corp. 430 Park Av, New York 22

Extra number published in Mid-October

Materials Research and Standards. $5 m American Society for Testing Materials, 1916 Race St, Philadelphia 3

Mathematics and Mathematical Physics. See Journal of Research of the National Bureau of Standards

Mechanical Engineering. $7 m American Society of Mechanical Engineers, 345 E 47th St, New York 17

Metal Finishing. $5 m Metals and Plastics Publications, Inc. 99 Kinderkamack Road, Westwood, N.J.

Metal Progress. $9 m American Society for Metals, Metals Park, Ohio

Metallurgia, the British Journal of Metals. 30s m Kennedy Press, Ltd. 31 King St, W. Manchester 3

Mill & Factory. $10 m Conover-Mast Publications, Inc. 205 E 42d St, New York 17

Mining Congress Journal. $3 m American Mining Congress, Ring Bldg, Washington 6, D.C.

Mining Engineering. $10 m American Institute of Mining, Metallurgical and Petroleum Engineers, Inc, 345 E 47th St, New York 17

Modern Materials Handling. $8 m Modern Materials Handling, 221 Columbus Av, Boston 16

Modern Metals. $10 m Modern Metals Pub. Co, 435 N. Michigan Av, Chicago 11

Modern Photography. $5 m Modern Photography, 165 W 46th St, New York

Modern Plastics. $8 m Breskin Publications, Inc, 770 Lexington Av, New York 21

Modern Textiles Magazine. $5 m Rayon Pub. Corp. 303 Fifth Av, New York 16

Extra number, Third Annual Conference of AATT

Naval Engineers Journal. $20 bi-m American Society of Naval Engineers, Inc. 1012 14th St. N.W. Washington 5, D.C.

Nucleonics. $8 m McGraw-Hill Pub. Co. Inc. 330 W 42d St, New York 36

Oil and Gas Journal. $6 w Petroleum Pub. Co. 211 South Cheyenne, Tulsa, Okla.

Operations Research. $10 bi-m Operations Research Society of America, Mt Royal and Guilford Avs, Baltimore 2

Paper Industry. $3 m Paper Industry Management Assn, 10 N. Clark St, Chicago 60602

Petroleum Management. $6 m (s-m Jl) Petroleum Engineer Pub. Co. 800 Davis Bldg, Dallas 2

Physics and Chemistry. See Journal of Research of the National Bureau of Standards

Physics Today. $4 m American Institute of Physics, 335 E 45th St, New York 17

Pit and Quarry. $7 m Pit and Quarry Publications, Inc. 431 S Dearborn St, Chicago 5

Plant Engineering. $10 m Technical Pub. Co, 308 E James St, Barrington, Ill.

Plastics Technology. $7 m Plastics Technology Magazine, 630 Third Av, New York 17

Plastics World. $8 m Cleworth Pub. Co, Inc, 1 River Road, Cos Cob, Conn.

Plating. $5 m American Electroplaters' Society, Inc. 443-445 Broad St, Newark N.J.

Power. $3 m McGraw-Hill, Inc, 330 W 42d St, New York 36

Power Apparatus and Systems. $10 bi-m Institute of Electrical and Electronics Engineers, Inc, Box A, Lenox Hill Station, New York 21

Name changed to IEEE Transactions on Power Apparatus and Systems April, 1963

Power Engineering. $10 m Power Engineering, 308 E James St, Barrington, Ill.

Process Design and Development. See Industrial and Engineering Chemistry

Product Engineering. $3 bi-w McGraw-Hill, Inc. 330 W 42d St, New York 36

Product Research and Development. See Industrial and Engineering Chemistry

Progressive Architecture. $20 m Reinhold Pub. Corp, 430 Park Av, New York 22

Public Roads. $1 bi-m Superintendent of Documents, Washington 25, D.C.

Public Works. $5 m Public Works Journal Corp, 200 S Broad St, Ridgewood, N.J.

QST. $5 m American Radio Relay League, Inc, 225 Main St, Newington, Conn.

RCA Review. $2 q Radio Corporation of America, RCA Laboratories Division, Princeton N.J.

Radio and Electronic Engineer. £5 10s m Institution of Electronic and Radio Engineers. 9 Bedford Square, London, W.C. 1

Formerly British Institution of Radio Engineers Journal: changed January, 1963

Radio Corporation of America Review. See RCA Review

Radio-Electronics. $5 m Gernsback Publications, Inc, 154 W 14th St, New York 11

Radio Propagation. See Journal of Research of the National Bureau of Standards

Research, Applied in Industry. 65s; U.S. $10.75 m Butterworths Publications, Ltd, 88 Kingsway, London, W.C. 2

Suspended publication, December, 1962

Research/Development. m F D Thompson Publications, Inc, 201 N. Wells St, Chicago 6

Review of Scientific Instruments. $11 m American Institute of Physics, 335 E 45th St, New York 17

$11 to members of scientific societies

Roads and Streets. $6 m The Gillette Group. Magazine Pub. Div. The Reuben H. Donnelley Corp, 466 Lexington Av, New York 17

Rock Products. $3 m Maclean-Hunter Pub. Corp, 79 W Monroe St, Chicago 3

Royal Aeronautical Society Journal. £10 10s m Royal Aeronautical Society, 4 Hamilton Place, London W. 1

Rubber Age. $5 m Palmerton Pub. Co, Inc, 101 W 31st St, New York 1

Rubber Chemistry and Technology. $9.50 5 times a yr American Chemical Society, Division of Rubber Chemistry, Prince and Lemon Sts, Lancaster, Pa.

Rubber World. $7 m Bill Brothers Pub. Corp, 630 3d Av, New York 17

SAE Journal. $12 m Society of Automotive Engineers, Inc, 485 Lexington Av, New York 17

SMPTE Journal. $16 m Society of Motion Picture and Television Engineers, 9 E 41st St, New York

Safety Maintenance. $4 m Alfred M. Best Co, Inc, 75 Fulton St, New York 38

Scientific American. $6 m Scientific American, Inc, 415 Madison Av, New York 17

Soap and Chemical Specialties. $4 m MacNair-Dorland Co. Inc, 254 W 31st St, New York 1

Soap Blue Book is extra number

Society of Automotive Engineers Journal. See SAE Journal

Society of Dyers and Colourists Journal. £7 m Society of Dyers and Colourists, Dean House, 19 Piccadilly, Bradford 1, Yorkshire, England

Society of Motion Picture and Television Engineers Journal. See SMPTE Journal

Sound; Its Uses and Control. $8 bi-m Sound, 335 E 45th St, New York 17

Space/Aeronautics. $15 m Conover-Mast Publications, Inc, 205 E 42d St, New York 17

Extra number, Research and Development Technical Handbook July

Steel. $25 w Penton Pub. Co, Penton Bldg, Cleveland 13

Tappi. m Technical Association of the Pulp and Paper Industry, 360 Lexington Av, New York 17

Technical Association of the Pulp and Paper Industry. See Tappi

Textile Industries. $2 m W. R. C. Smith Pub. Co, 1760 Peachtree Rd, N.W, Atlanta 9

Extra number published in Mid-September

Textile Research Journal. $25 m Textile Research Institute, Inc, Publications Department, P.O. Box 625, Princeton, N.J.

Textile World. $2 m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36

Tool and Manufacturing Engineer. $6 m American Society of Tool and Manufacturing Engineers, 10700 Puritan Av, Detroit 38

Traffic Quarterly. q Eno Foundation for Highway Traffic Control, Inc, Saugatuck, Conn.

Price on request

Water & Sewage Works. $5 m Scranton Pub. Co, Inc, 35 E. Wacker Drive, Chicago 1

Two numbers published in October, included in annual subscription

Water Pollution Control Federation Journal. $10 m Water Pollution Control Federation, 4435 Wisconsin Av, N.W, Washington 16, D.C.

Water Works Engineering. $5 m Water Works Engineering, 466 Lexington Av, New York 17

Welding Engineer. $3 m Welding Engineer Publications, Inc, P.O. Box 28, Morton Grove, Ill.

Extra number published in Mid-June

Welding Journal. $8 m American Welding Society, 345 E 47th St, New York 17

Westinghouse Engineer. $2.50 bi-m Westinghouse Engineer, P.O. Box 2278, 3 Gateway Center, Pittsburgh 30

Wire and Wire Products. $8 m Quinn-Brown Pub. Corp, 299 Main St, Stamford, Conn.

Wireless World. £2 2s; U.S. $6.50 Canada $6.50 m Iliffe Electrical Publications, Ltd, Dorset House, Stamford St, London, S.E. 1

Key to General Abbreviations

+	continued on later pages of the issue
abr	abridged
Ag	August
Ap	April
arch	architect
bibliog	bibliography
comp	compiled or compiler
cond	condensed
cont	continued
D	December
diag	diagram
ed	edited or edition or editor
F	February
il	illustrations
inc	incorporated
Ja	January
Je	June
Jl	July
Mr	March
My	May
N	November
n s	new series
no	number
O	October
p	page
pl	plate
por	portrait
pseud	pseudonym
pt	part
rev	revised
S	September
sup	supplement
tr	translated or translation or translator
v	volume
yrbk	yearbook

Sample entry: ELECTRIC lamps, Fluorescent
840-cycle economy; analyses of two high-frequency fluorescent lighting installations. T. E. Sparling and J. J. Silvers. il diags Elec Constr & Maint 62:57-61+ Ja '63

Explanation: An illustrated article with diagrams, on the subject ELECTRIC lamps, Fluorescent entitled "840-cycle economy: analyses of two high-frequency fluorescent lighting installations," by T. E. Sparling and J. J. Silvers, will be found in volume 62 of Electrical Construction and Maintenance, page 57-61 (continued on later pages of the same issue) the January 1963 number

Applied Science & Technology Index

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ABS (alkyl benzenesulfonate). See Benzenesulfonates

ACTH

ACTH molecule. C. H. Li. il diags Sci Am 209:46-53 Jl '63

Entire 39-unit ACTH molecule synthesized. Chem & Eng N 41:44-5 Ag 5 '63

Studies on polypeptides. K. Hofmann and others. bibliog il Am Chem Soc J 84:4470-86 D 5 '62

Studies on polypeptides; synthesis and biological evaluation of a tricosapeptide possessing essentially the full biological activity of ACTH. K. Hofmann and others. bibliog Am Chem Soc J 84:4475-80 D 5 '62

Studies on polypeptides; the adrenocorticotropic potency of an eicosapeptide amide corresponding to the N-terminal portion of the ACTH molecule; contribution to the relation between peptide chain-length and biological activity. K. Hofmann and others. bibliog il Am Chem Soc J 84:4481-6 D 5 '62

Synthesis of a biologically active pentadecapeptide corresponding to an altered sequence in the adrenocorticotropin (ACTH) structure. C. H. Li and others. bibliog Am Chem Soc J 85:1895-6 Je 20 '63

ADS. See Association of Diesel specialists

AALTO, Alvar

Aalto's recent work in West Germany. por Arch Forum 118:120-5 Mr '63

Alvar Aalto today. por Arch Rec 133:135-50 Ap '63

ABBREVIATIONS

Abbreviations for scientific and engineering terms. J Pet Tech 14:1352 D '62

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Symbols

ABERRATION (optics)

Measurement of longitudinal spherical aberration in the extra-axial region of lenses. F. E. Washer and W. R. Darling. il diags J Res Nat Bur Stand 66C:185-95 Jl '62

ABIETIC acid

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Creative ability

ABILITY tests

Doubtful methods in personnel appraisal. P. Moon. bibliog il Eng J 46:42-6 S '63

How aptitude testing helps you when you hire. S. M. Burt. Inland Ptr/Am Lithogr 152:49-50 O '63

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JETS mails results of aptitude tests. Chem & Eng N 41:50-1 My 6 '63

Measuring the man. N. E. Gilmour, jr. Res/Develop 14:20-2 Jl '63

Psychological research; aid to engineer selection and recruitment. P. Moon. bibliog Can Min & Met Bul 56:142-5 F '63

ABLATION shielding. See Shielding (heat)

ABRASION

Abrasion of materials by suspended matter. H. P. Tardif and H. Marquis. il diags Can Min & Met Bul 55:773-82 bibliog(p781-2) N '62

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Effect of soil on resistance to abrasion of a wool fabric. M. A. Morris and others. Textile Res J 33:424-31 Je '63

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Acme abrasive belt finishing machine can handle tapered or contoured parts. il diag Am Mach/Metalworking Manuf 107:160 My 13 '63

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ABRASIVE wheels. See Grinding wheels

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Abrasive advances previewed. Iron Age 191:45 Ap 11 '63

Abrasive machining; how good is it? L. P. Tarasov. Tool & Manuf Eng 50:103-6 Ap '63

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Abrasives tumble finer finishes. R. D. Anderson. il Iron Age 192:76-7 S 5 '63

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End face seals in abrasive service. H. Tankus. il diags Lub Eng 19:403-9 O '63

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Abrasive belts

Metal finishing

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Illness-absence recording; accurate or inaccurate? J. S. Felton. bibliog Archives Environmental Health 5:495-504 N '62
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Rate of glycerol absorption by ion exchange resins. R. P. Griffin and J. S. Dranoff. A I Ch E J 9:283 Mr '63
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Silica gel
Sound—Absorption

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Bearing metals
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Brass
Bronze
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Cobalt alloys
Copper alloys
Gold alloys
Gun metal
Indium alloys
Iron alloys
Lead alloys
Lithium alloys
Magnesium alloys
Molybdenum alloys
Monel metal
Nickel alloys
Niobium alloys
Palladium alloys
Permalloy
Plutonium alloys
Rhenium alloys
Silicon alloys
Silver alloys
Steel alloys
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Design of a 4000/6000-ton plate stretcher. R. J. Elger. il diags Inst Metals J 92:1-5 '63-64
Gearbox plates machined under numerical control; Newall jig borer. il Engineering 195:510 Ap 12 '63
High current welding of thick aluminum plate. il Light Metal Age 21:8 Ap '63
Huge plates formed for Saturn rocket. il Mod Metals 19:76 Mr '63
Practical aspects of stretching aluminium alloy plate for aircraft. A. R. Martin. il diags Inst Metals J 92:6-11 '63-64

ALUMINUM poles. See Poles, Aluminum

ALUMINUM roofs. See Roofs, Aluminum

ALUMINUM silicates
See also
Albite
Andalusite
Anorthite
Bentonite
Kyanite
Mullite
Petalite
Pyrophyllite
Staurolite
Tourmaline

ALUMINUM soaps. See Soap, Metallic

ALUMINUM sulfate
Kinetic studies of the thermal decomposition of ferric sulphate and aluminum sulphate. N. A. Warner and T. R. Ingraham. bibliog diags Can J Chem Eng 40:263-7 D '62

ALUMINUM tanks. See Tanks, Aluminum

ALUMINUM towers. See Towers, Aluminum

ALUMINUM tubes. See Tubes, Aluminum

ALUMINUM walls. See Walls, Aluminum

ALUMINUM waste

Melting colored foil. il Light Metal Age 21:23 Ap '63

ALUMINUM wire. See Wire, Aluminum

ALUMINUM work

Alroll rolling reroll. il Mod Metals 19:50-1 Jl '63
Aluminum bubbles over can market; technique for forming cans. F. J. Starin. Iron Age 191:69 Ja 17 '63
Aluminum fascia prevents drippage, runover. il Mod Metals 19:102 My '63
Aluminum-fiberglass garage doors. il Mod Metals 19:48-9 S '63
Aluminum lubrication advancement. il Light Metal Age 20:9 F '63
Aluminum pellets form sheets. F. J. Starin. il diag Iron Age 191:102-3 Mr 7 '63
Aluminum skeleton for an airlift giant. il Light Metal Age 20:21 F '63
Biggest aluminum impact extrusions. il Mod Metals 19:76 Je '63
Bulge forming of Saturn parts. G. Challis. il diags Am Mach/Metalworking Manuf 107:53-5 Mr 4 '63
Cast slugs expedite forging. il Iron Age 191:56-7 Ja 31 '63
Compound brightens aluminum; adherent film improves cutting and rolling; Cindol. il Iron Age 192:52-3 Ag 8 '63
Concrete dies used for forming aluminum. il Light Metal Age 20:7 D '62
Deep hole concentricity achieved by gun driller unit. il Light Metal Age 21:17 Ap '63
De-oxidizer lubricates aluminum. Am Mach/Metalworking Manuf 107:57 F 4 '63
Designing with aluminum hand forgings. A. E. Favre. diags Machine Design 35:172-6 O 10 '63
Designing with extruded aluminum. R. L. Shinsky. diags Materials in Design Eng 57:94-7 Ap '63
Extrusion survey results; replies from 1,000 users indicate consumption of over 400 million pounds this year. Mod Metals 19:28-30+ Ag '63
Extrusion trends. S. M. Blumenreich. Mod Metals 19:40+ Je '63
Extrusions, castings improve design, performance of heavy-duty door closers. il diags Mod Metals 19:42+ Ap '63
Extrusions speed erection of U.S. fair pavilion; Australian international trade fair. il Mod Metals 19:72 Ag '63
Fabricating skin segments for the Saturn booster; simultaneous aging and forming. R. E. Layton. il diag Am Mach/Metalworking Manuf 107:67-70 My 27 '63
Forming aluminum case history; molding-in-place increases boot life. il Light Metal Age 21:13 Je '63
Forming aluminum with urethane tooling. il diag Light Metal Age 20:15 F '63
Forming operations on bomb ejection racks. C. O. Herb. il diag Mach 69:116-21 N '62
GE reveals new lubricant for working with aluminum. Steel 152:30 Ja 28 '63
Hillman Imp cylinder block. il diags Automobile Eng 53:454-63 O '63
How to braze aluminum. C. L. Bulow. il diags Mach 70:132-7 O '63
How to form and join vinyl-clad aluminum sheet. J. K. Wareham and W. M. Rogerson. bibliog il diags Product Eng 34:98-102 Ap 15 '63
How to solder aluminum. il diags Mod Metals 18:61+ D '62; 36+ Ja; 19:40+ F; 50+ Mr '63 (reprints $1)
Hydroform improves deep draw. R. H. Eshelman. il Iron Age 191:58-9 Ja 24 '63
Hydrostatic extrusions take big step forward. il Mod Metals 19:86 Mr '63
Improvements in the press-forming properties of aluminium-magnesium alloy sheet by the use of a recovery anneal. J. C. Wright and others. Inst Metals J 91:321-4 '62-63
Improving lubricants. D. MacDonald. il diags Product Eng 34:88-9 F 18 '63
Integrated line cuts inventory. H. Craig. il Am Mach/Metalworking Manuf 107:108-9 F 18 '63
Largest impact extrusion. il Light Metal Age 21:24 Je '63
Low-cost process rolls sheet from pellets. il diag Mod Metals 19:24 Mr '63
Magnetic metal-forming; Magneform. F. L. Church. il diags Mod Metals 19:36+ Jl '63
New lubricants for aluminum. il Mod Metals 19:56 F '63
New process rolls aluminum sheet from pellets. A. S. Hester. il Ind & Eng Chem 55:30-1 Jl '63
New technique for aluminum forgings; spin forging. S. A. Spachner. il Light Metal Age 20:5 F '63
On-site fabrication of giant rocket casings. flow diags Mod Metals 19:36+ F '63
One-piece curtain track. diags Mod Metals 19:63 Ag '63
Pellets rolled into aluminum sheet. diag Mach 69:121 Ag '63
Pellets to sheet in one step. R. R. Palik and W. F. Duncan. il Steel 152:38-42 Ap 1 '63
Press stamps holes by the acre. il Iron Age 192:69 Jl 25 '63
Progress reported on hydrostatic extrusion. il Steel 152:65 Mr 4 '63
Reynolds rolls instant aluminum sheet. Am Mach/Metalworking Manuf 107:110 Mr 18 '63
Reynolds unveils new process for rolling aluminum sheets. il Steel 152:30-1 Mr 4 '63
Roll forming of aluminum speeded by high speed cutting development. il Light Metal Age 21:5 Ap '63
Rolling aluminum rings. D. G. Buckpitt. il Light Metal Age 21:8 Je '63
Screw machine troubleshooting. J. H. Den Boer. il Am Mach/Metalworking Manuf 107:71-5 S 2 '63
Self-fastening aluminum jacketing introduced. Chem & Eng N 41:48 S 9 '63
Shot-peening forms aircraft panels. B. Barnes. il Am Mach/Metalworking Manuf 107:116 Ap 1 '63
Tiny pellets to Al sheet in a hurry. il diag Eng & Min J 164:84 Ap '63
To a profitable extrusion industry. L. Starr. Light Metal Age 20:19-22 D '62; Excerpts. Mod Metals 18:46-7 Ja '63
Transfer line speeds output of complex aluminum parts. il Iron Age 191:76-7 Mr 21 '63
Turning spheres to 25 millionths. il Am Mach/Metalworking Manuf 107:80-1 S 2 '63
Twin tunnels in Scotland use 70 tons of aluminum sheet, 50 miles of extrusions. il diags Mod Metals 19:44+ S '63

See also
Aluminum—Finishing
Aluminum—Welding
Aluminum founding

ALUMINUM works

Modern aluminum plant opened in Colombia; Aluminio Alcan de Colombia, S.A. il Light Metal Age 20:12 D '62
Olin expands aluminum mill. Chem & Eng N 41:36 Jl 15 '63
Pechiney purchases 40 per cent interest in Howe Sound. Mod Metals 18:76 N '62
User develops own aluminum sources. il Iron Age 191:103 Mr 7 '63

Costs

Predicting chemical costs in aluminum brightening. G. D. Nelson. Plating 50:651-7 Jl '63

Equipment

All-aluminum equipment helps produce aluminum. il Mod Metals 19:90 My '63
Alroll ends breaking-in phase. Mod Metals 19:102-3 My '63
Alroll rolling reroll. il Mod Metals 19:50-1 Jl '63
Alroll unit may be world's most powerful aluminum hot mill. il Iron & Steel Eng 40:167 Jl '63
Aluminium ltd. affiliates operate, plan fabricating plants. il Mod Metals 18:84 D '62
Checks on inside eliminate plumbing on outside. L. J. Bandiera. diags Hydraulics & Pneumatics 16:107 Ap '63
Consolidated to double aluminum sheet capacity. Mod Metals 19:72 F '63
Continuous casting; key to low-cost siding. H. K. Darby. il Mod Metals 19:38+ My '63
Design of a 4000/6000-ton plate stretcher. R. J. Elger. il diags Inst Metals J 92:1-5 '63-64
Howe expansion features fast foil mill. il Light Metal Age 21:13 Ag '63
Howe Sound beefs up rolling mill; eyes primary aluminum production. il Mod Metals 19:66 Jl '63
Kaiser installs new ring mill at Erie, Pa. plant. il Mod Metals 19:86 Ag '63
New mill beefs up India's arms industry. il Mod Metals 19:82-3 Je '63
Olin boosts aluminum rolling mill capacity 50 per cent. il Mod Metals 19:84 Ag '63
Olin shows new aluminum facilities in Ohio plant. il Steel 153:33 Jl 15 '63

ALUMINUM works—Equipment—*Continued*

Pittsburgh mill doubles Scovill rolling capacity. il Light Metal Age 21:20 Je '63

Rolling mill operation; all-aluminum roll coolant system. il Light Metal Age 21:14 Je '63

Surface coating plant for wide strip now in operation at Birmingham works. il diags Metallurgia 68:15-16 Jl '63

Vertical mill forms huge rings. il Iron Age 191:79 Je 6 '63

Quality control

Eddy currents test aluminum rod quality. il Steel 153:85-6 Jl 29 '63

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Effect of alum and pH on sheet acidity. W. F. Reynolds and W. F. Linke. bibliog Tappi 46:410-15 Jl '63

Emergency alum treatment of open reservoirs. W. R. Ree. diag Am Water Works Assn J 55:275-81 Mr '63

Interaction of rosin with some metal ions. E. Strazdins. bibliog Tappi 46:432-7 Jl '63

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Aluminum sulfate

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Embrittlement of alpha-brasses by liquid metals. R. B. Waterhouse and D. Grubb. il Inst Metals J 91:216-19 '62-63

Extraction of lanthanons with alkali metal amalgams; counter-current process for the extraction of samarium or ytterbium. M. F. Barrett and N. E. Topp. diag J Ap Chem 13:7-12 Ja '63

Investigation of the constitution of the mercury-tin system. D. F. Taylor and C. L. Burns. bibliog diags J Res Nat Bur Stand 67A:55-70 Ja '63

Mercury alloy freezes at-74 F. J. T. Boag. Materials in Design Eng 58:105 O '63

Radiochemical separation of bismuth by amalgam exchange. F. E. Orbe and others. bibliog Anal Chem 35:1436-8 S '63

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Zinc amalgam

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Biogenetic origin of the C_6-C_1 unit of lycorine. R. J. Suhadolnik and others. bibliog Am Chem Soc J 84:4348-9 N 20 '62

Biogenetic-type synthesis of the amaryllidaceae alkaloid ring system. R. A. Abramovitch and S. Takahashi. bibliog Chem & Ind p 1039-40 Je 22 '63

Biosynthesis in the amaryllidaceae; incorporation of 3-C^{14}-tyrosine and phenylalanine in nerine bowdenii W. Wats. W. C. Wildman and others. Am Chem Soc J 84:4599-600 D 5 '62

In vitro alkaloid biosynthesis in the amaryllidaceae; norbelladine O-methylpherase. H. M. Fales and others. Am Chem Soc J 85: 2025-6 Jl 5 '63

AMATEUR moving pictures. See Moving pictures. Amateur

AMATEUR radio operators. See Radio operators Amateur

AMBER glass. See Glass. Colored

AMEBA

Ways and waywardnesses of amoeba. M. Taylor. bibliog il diags Am Scientist 50:576-96 D '62

AMERICAN architecture. See Architecture. American

AMERICAN association for contamination control

Annual convention. 2d. Boston. May 1-3. Heating-Piping 35:148-9 Je '63

AMERICAN association for textile technology

Annual conference. 3d; papers presented. Mod Textiles Mag 44:Special ed p6-70 '63

AMERICAN association of cost engineers

Annual meeting. San Francisco. Eng N 171: 15 Ag 1 '63

AMERICAN association of petroleum geologists

American association of petroleum geologists membership directory. Am Assn Pet Geologists Bul 47:1-218 pt 2 Mr '63

Annual meeting. 48th. Houston. March 25-28. Am Assn Pet Geologists Bul 47:1452-94 Jl '63

Annual meeting. 48th. Houston. March 25-28; program and abstracts of technical papers. Am Assn Pet Geologists Bul 47: 346-77 F '63

AMERICAN association of physics teachers

AAPT-AIP regional counselor program: a counselor's report. G. L. Hollingsworth. Phys Today 16:50-2+ F '63

APS-AAPT joint meeting. New York. Jan. 23-26. Phys Today 16:78-80 Mr '63

Report of the president. 1962. F. Verbrugge. Am J Phys 31:473-4 Je '63

AMERICAN association of port authorities

Annual meeting. 51st. Baltimore. Oct. 8-11; with abstracts of papers. Marine Eng/Log 67:62+ N '62

AMERICAN association of railway surgeons

Brief history. R. B. Kepner. Ind Med 32:349-50 S '63

AMERICAN association of state highway officials

Annual meeting. 48th. Miami Beach. Eng N 169:19-20 D 13 '62

Annual meeting, Miami Beach, Dec. 3-7. Roads & Sts 106:31+ Ja '63

New AASHO head to fight two-front highway war. Eng N 169:47-8+ D 13 '62

Regional conference on improved highway engineering productivity. Albany. Eng N 171:20-1 Jl 11 '63

Special meeting of the AASHO-AGC joint cooperative committee. Chicago. Nov. 12. Roads & Sts 106:60-1 Ja '63

AMERICAN association of textile chemists and colorists

Addresses at spring meeting. South Central section. Am Dyestuff Rep 52:561-4+ Jl 22 '62

Administrative committee appointments. Am Dyestuff Rep 52:173-4 Mr 4 '63

Annual convention. Atlanta. Nov. 14-17. Textile World 112:91-2+ D '62

Annual convention. Boston. Oct. 30-Nov. 1; technical program and list of exhibitors. Mod Textiles Mag 44:53-5 O '63

Annual convention. Boston. Oct. 30-Nov. 1; with program. list of exhibitors and abstracts of papers. Am Dyestuff Rep 52:780-804+ O 14 '63

Council highlights; meeting. New York. Jan. 25. Am Dyestuff Rep 52:249-51 Ap 1 '63

Council highlights. 232d meeting. New York. April 26. Am Dyestuff Rep 52:494-5 Je 24 '63

History of the Northern New England section. A. E. Sampson. il Am Dyestuff Rep 52:821-32 O 14 '63

National convention, Atlanta, Nov. 14-17; with abstracts of papers, program, floor plan and list of exhibits. Am Dyestuff Rep 51:819-47. 854-60+. 1040-6 O 29. D 24 '62; Mod Textiles Mag 43:32+ N '62; 44:29-30+ Ja; 24+ F; 36 Mr '63

New national headquarters. G. P. Paine. il map plan Am Dyestuff Rep 51:868-70 O 29 '62

President's address. E. Morrill. Am Dyestuff Rep 51:926-7 N 26 '62

Work to get under way soon on AATCC's new home. map Mod Textiles Mag 43:27 D '62

Committee on research

Meeting, 209th. New York, Sept. 20; with text of reports. Am Dyestuff Rep 51:938-41 N 26 '62

Meeting. 210th. New York. Jan. 24. Am Dyestuff Rep 52:337-43 Ap 29 '63

Meeting 211th. New York. April 25; with texts of reports. Am Dyestuff Rep 52: 653-8 Ag 19 '63

AMERICAN ceramic society

Annual meeting. 65th. Pittsburgh. April 28-May 2. Am Cer Soc Bul 42:355-77 Je '63

Annual meeting 65th. Pittsburgh. April 28-May 2; with abstracts of papers. Glass Ind 44:375-9+ Jl '63

Annual meeting. 65th. Pittsburgh. April 28-May 2; with convention guide and abstracts of papers. Cer Ind 80:22-39. 94-7 Ap; 47-50 Je '63

Annual meeting. 65th, Pittsburgh, April 28-May 2; with program. Am Cer Soc Bul 42:163-5 Ap '63

Membership roster. Am Cer Soc Bul 42:547-89+ O '63

Pacific Coast regional meeting, 15th, Seattle, Oct. 17-19; abstracts of papers. Glass Ind 43:665-7 D '62

Pacific Coast regional meeting. 16th, Los Angeles. Oct. 23-25; program. Am Cer Soc Bul 42:510-11+ S '63

Basic science division

Annual meeting. Pittsburgh. April 29-May 1; program and abstracts of papers. Am Cer Soc Bul 42:187+ Ap '63

Fall meeting. Washington. Oct. 6-8; program and abstracts of papers. Am Cer Soc Bul 42:515-17 S '63

Ceramic-metal systems division

Annual meeting. Pittsburgh. April 29-May 1: program and abstracts of papers. Am Cer Soc Bul 42:205+ Ap '63

Fall meeting. French Lick. Ind. Sept. 10-13; program and abstracts of papers. Am Cer Soc Bul 42:458-61 Ag '63

Fall meeting. 2d. French Lick. Ind. Cer Ind 79:82 N '62

AMERICAN ceramic society—*Continued*

Design division

Annual meeting, Pittsburgh, April 29-May 1; program and abstracts of papers. Am Cer Soc Bul 42:211+ Ap '63

Electronics division

Annual meeting, Pittsburgh, April 29-May 1; program and abstracts of papers. Am Cer Soc Bul 42:215+ Ap '63

Fall meeting, Gatlinburg, Tenn. Oct. 1-4; program and abstracts of papers. Am Cer Soc Bul 42:529+ S '63

Glass division

Annual meeting, Pittsburgh, April 29-May 1; abstracts of papers. Glass Ind 44:439-40 Ag '63

Annual meeting, Pittsburgh, April 29-May 1; program and abstracts of papers. Am Cer Soc Bul 42:223+ Ap '63

Fall meeting, Bedford Springs, Pa. Oct. 9-12; program and abstracts of papers. Am Cer Soc Bul 42:522-3+ S '63

Materials and equipment division

Annual meeting, Pittsburgh, April 29-May 1; program and abstracts of papers. Am Cer Soc Bul 42:233+ Ap '63

Fall meeting, Bedford Springs, Pa. Sept. 25-28; program and abstracts of papers. Am Cer Soc Bul 42:518-19 S '63

Refractories division

Annual meeting, Pittsburgh, April 29-May 1; program and abstracts of papers. Am Cer Soc Bul 42:237+ Ap '63

Fall meeting, Bedford Springs, Pa. Oct. 3-5; program and abstracts of papers. Am Cer Soc Bul 42:512-14 S '63

Structural clay products division

Annual meeting, Pittsburgh, April 29-May 1; program and abstracts of papers. Am Cer Soc Bul 42:247+ Ap '63

Fall meeting, Denver, Colo. Sept. 18-21; program and abstracts of papers. Am Cer Soc Bul 42:462-3 Ag '63

Whiteware division

Annual meeting, Pittsburgh, April 29-May 1; program and abstracts of papers. Am Cer Soc Bul 42:253+ Ap '63

Fall meeting, Bedford Springs, Pa. Sept. 25-28; program and abstracts of papers. Am Cer Soc Bul 42:518-19 S '63

AMERICAN chemical society

ACS organization; how it works, how to use it. A. H. Emery. Chem & Eng N 41:70-4 F 4 '63

ACS preparing exhibit for World's fair; contribution of chemists and chemical engineers to be illustrated by their role in the study of the sea. il Chem & Eng N 41:72 O 7 '63

Annual report, 1962. Chem & Eng N 41:53-75 Mr 4 '63

Arveson is ACS president-elect for 1963. Chem & Eng N 40:64 D 10 '62

Board of directors minutes, June 8, 1963 and highlights of official reports. Chem & Eng N 41:92-9 Jl 29 '63

National meeting, 143d, Cincinnati, Jan. 13-18; program. Chem & Eng N 40:68-80 D 10 '62

National meeting, 144th, Los Angeles, March 31-April 5; program. Chem & Eng N 41:82-126 F 25 '63

National meeting, 145th, New York, Sept. 8-13; program. Chem & Eng N 41:54-118 Ag 5 '63

National meeting, 146th, Denver, Jan. 19-24; with program, Chem & Eng N 41:156-61 N 4 '63

Nomenclature committee steps up activity to meet needs of modern chemistry. Chem & Eng N 41:72 O 21 '63

Northwest regional meeting, 18th, Bellingham, Wash. June 17-18; program. Chem & Eng N 41:74-5+ My 13 '63

Officers, directors, councilors, and committees. Chem & Eng N 41:104-6+ F 18 '63

Officers of local sections and divisions, maps Chem & Eng N 41:66+ Mr 25 '63

Official reports from the 142d national meeting. Chem & Eng N 40:68-83 N 5 '62

Official reports, 144th national meeting, Los Angeles, March 31-April 5. Chem & Eng N 41:66-92 My 27 '63

Progress report number 36 of the committee on professional training. Chem & Eng N 41:79-84 Mr 18 '63

Reports from the Board of directors meeting Dec. 8-9, and reports of committees. Chem & Eng N 41:78-91 Ja 28 '63

W. D. Collins named chairman emeritus of the committee on analytical reagents. Anal Chem 35:sup97A F '63

Chemical abstracts service

New building slated for Chemical Abstracts. il Chem & Eng N 41:92-3 Ja 28 '63

New CAS building going up; council and board approve the $6.797 million project. Chem & Eng N 41:134+ Ap 15 '63

Division of analytical chemistry

Meeting, Los Angeles, March 31-April 5; program. Anal Chem 35:sup44A-50A Mr '63

Division of rubber chemistry

Bylaws. Rubber Chem & Tech 35:sup xii-xx D '62

Fall meeting, Cleveland, Oct. 17-19; program. Rubber Chem & Tech 35:sup xxi-xxiii O '62

Fall meeting, New York, Sept. 11-13. Rubber World 149:100+ O '63

Joint meeting of the Divisions of rubber chemistry of the American chemical society and the Chemical institute of Canada, Toronto, May 8-10; program. Rubber Chem & Tech 36:sup xiii-xvi Jl '63

Joint meeting with CIC Division of rubber chemistry, Toronto, May 8-10. Rubber Age 93:431-4 Je '63; Rubber World 148:71 Je '63

Meeting, 82d, Cleveland, Oct. 17-19. Rubber Age 92:275-7 N '62; Rubber World 147:79-80 N '62

Meeting, 83d, Toronto, May 8-10; program and abstracts of papers. Rubber Age 93:94-102 Ap '63; Rubber World 148:71-8 Ap '63

Meeting, 84th, New York, Sept. 11-13; program and abstracts of papers. Rubber Age 93:587-95; 94:113-16 Jl, O '63; Rubber World 148:83-90 Jl '63

Officers; committees; sponsored rubber groups. Rubber Chem & Tech 35:sup iii-x O '62

AMERICAN chemical society journal (periodical)

Dr Marshall D. Gates named JACS editor. Chem & Eng N 40:76 N 12 '62

AMERICAN concrete institute

ACI committee work. Am Concrete Inst J 60:sup 11+ Je '63

ACI '63 officers. Am Concrete Inst J 60:sup9-10+ Ap '63

Annual meeting, 59th, Atlanta, Ga. March 4-7; with abstracts of papers, and list of exhibitors. Am Concrete Inst J 60:sup3-7+ My '63

Annual meeting, 59th, Atlanta, March 4-7; with program. Am Concrete Inst J 60:sup3-5+ F '63

Annual report, 1962. Am Concrete Inst J 60:sup 1-6 Ap '63

Fall meeting, 15th, Seattle, Sept. 28-29; with abstracts of papers. Am Concrete Inst J 59:sup 12-17 N '62

Fall meeting, 16th, Toronto, Nov. 11-14; program. Am Concrete Inst J 60:sup2-3+ N '63

International service. R. C. Reese. Am Concrete Inst J 60:561-5 My '63

New numbers designate ACI technical committees. Am Concrete Inst J 60:sup 10-12 Ja '63

New technical committee chairmen and members appointed. Am Concrete Inst J 60:sup27-8+ Ap '63

AMERICAN die casting institute

Annual meeting, Chicago. Mod Metals 19:50+ O '63

Annual meeting, Chicago, Sept. 12-13. Foundry 90:129+ O '62

AMERICAN electroplaters society

AES research committee; quarterly report and summary of research projects. Plating 50:225, 514 Mr, Je '63

Annual convention, 50th, Atlantic City, June 22-28; program and abstracts of papers. Plating 50:529-37 Je '63

Annual convention, 50th, Atlantic City, June 22-28; with program and abstracts of papers. Metal Finishing 61:72-81 Je; 39-44 Ag '63

Annual convention, 50th, Atlantic City, N. J. June 23-27. Plating 50:740-50 Ag '63

Annual report. Plating 50:541-52 Je '63

Branch directory, as of Dec. 1, 1962. Plating 50:70-4 Ja '63

Constitution and bylaws; effective June 26, 1963. Plating 49:1183-7 N '62

Financial report, fiscal year, July 1, 1962-June 30, 1963. Plating 50:834-8 S '63

Tenth interim meeting AES Supreme society; Kansas City, Mo. Jan. 19; program. Plating 50:52 Ja '63

AMERICAN foundrymens society

Casting congress, 67th, St Louis, May 6-10; with program. Foundry 91:108-17 My '63

Castings congress, 67th, St Louis, May 6-10; with abstracts of papers. Foundry 91:54-9, 152-66 Je; 145-6+ Jl '63

Five selected for American foundrymen's society awards. Foundry 91:118-19 My '63

AMERICAN gas association

American gas association and Pacific coast gas association annual convention, Los Angeles, Oct. 13-16; preview. Am Gas Assn Mo 45:6-9 Jl-Ag '63

American gas association and Pacific coast gas association annual meeting, Los Angeles, Oct. 13-16; program. Gas 39:80-2 O '63

Annual convention, 44th, Atlantic City, Oct. 7-10; with papers presented and list of officers, section leaders elected. Am Gas Assn Mo 44:2-13+ N '62

Annual meeting, 44th, Atlantic City, Oct. 7-10. Gas Age 129:22-36 N '62

Conference of the production, transmission and operating sections, Pittsburgh, May 13-17. Am Gas Assn Mo 45:24-7 Je '63; Gas Age 130:22-3 Jl '63

Fifteenth annual accident prevention conference, St Louis, Sept. 10-11. Am Gas Assn Mo 45:4-5+ O '63

Research and utilization conference, Cleveland, April 16-18; program. Am Gas Assn Mo 45:6+ Mr '63

When is good not good enough? management audit of A.G.A. general fund activities. J. E. Heyke, jr. Am Gas Assn Mo 45:2-3 O '63

AMERICAN institute of aeronautics and astronautics

AIAA countdown. S. P. Johnston. Astronautics & Aerospace Eng 1:122-3 F '63

Constitution and bylaws. Astronautics & Aerospace Eng 1:94-9 O '63

Electric propulsion conference, Colorado Springs, March 11-13; abstracts of papers. Astronautics & Aerospace Eng 1:89-93 Je '63

AMERICAN institute of architects

Alvar Aalto wins 1963 A.I.A. gold medal; awards include first presidential citation. Arch Rec 133:26 Mr '63

A.I.A. award program for 1963 honors 13 buildings. il Arch Rec 133:12-15 Mr '63

AIA awards. Prog Arch 44:64 Mr '63

AIA chided on transit report. E. E. Halmos, jr. Prog Arch 43:54 D '62

Annual convention, Miami, May 5-9. Arch Rec 133:23 My; 10+ Je '63; Eng N 170:26 My 16 '63; Arch Forum 118:5+ Je '63; Prog Arch 44:59 Je '63

Convention, 95th, Miami Beach, May 5-9; products to be exhibited; illustrations with text. Prog Arch 44:93-4+ Ap '63

Hawaii A.I.A. makes 1962 honor awards. il Arch Rec 133:14-15 Ap '63

Kennedy receives citation for policies on architecture, art. Arch Rec 134:33 Ag '63

Western regional conferences. Arch Rec 133:26 Ja '63

AMERICAN institute of chemical engineers

Annual meeting, 55th, Chicago, Dec. 2-6; with program and abstracts of papers. Chem Eng Prog 58:104+ O '62

Annual meeting, 56th, Houston, Dec. 1-5; with program. Chem Eng Prog 59:104+ O '63

National meeting, 49th, New Orleans, March 11-14; with program and list of papers. Chem Eng Prog 59:94-6+ Ja; 94+ F '63

National meeting, 50th, Buffalo, May 6-8; with program. Chem Eng Prog 59:104-6+ Mr; 92+ Ap '63

National meeting, 51st, Puerto Rico, Sept. 29-Oct. 2, with program. Chem Eng Prog 59:97-100+ Jl; 90-3 Ag '63

AMERICAN institute of electrical engineers

AIEE winter general meeting, New York, Jan. 27-Feb. 1; program. IEEE Proc 51:sup 32A+ Ja '63

AWS 44th annual meeting and AIEE electric welding conference, Philadelphia, April 21-25; program. Welding J 42:42-5 Ja '63

Fall general meeting, Chicago; with abstracts of papers. Elec World 158:53-4 D 3 '62; Elec Eng 81:986-9 D '62

IEEE's endowment in electronics from AIEE. I. S. Coggeshall. bibliog Elec Eng 82:2-20 Ja '63

Pacific energy conversion conference, San Francisco. Elec Eng 81:824-6 O '62

AMERICAN institute of mining, metallurgical and petroleum engineers

Annual meeting, Dallas; abstracts of papers. Eng & Min J 164:78-80 Ap '63

Annual meeting, 92d, Dallas, Feb. 24-28. Min Eng 15:62-5 Ap '63; J Metals 15:450-4 Je '63

Annual meeting, 92d, Dallas, Feb. 24-28; with program and abstracts of papers. Min Eng 14:61-6 N '62; 15:53-66 Ja '63

Annual meeting, 92d, Dallas; with abstracts of papers. Pit & Quarry 56:78-83 Jl '63

Annual meeting plant trips. J Metals 15:112-15 F '63

Pittsburgh section's 17th annual off-the-record meeting, Pittsburgh, Nov. 3. J Metals 15:6-7 Ja '63

Societies name 1964 AIME officers and directors. Min Eng 15:280-1 Jl '63

Metallurgical society

Annual meeting, 92d, Dallas, Feb. 24-28; program and abstracts of papers. J Metals 15:65-95 Ja '63

Fall meeting, Cleveland, Oct. 20-24; with program and abstracts of papers. J Metals 15:665-728 S '63

Fellows of the Metallurgical society. J Metals 15:50-1 Ja '63

Society directors. J Metals 15:322-3 Ap '63

Society of mining engineers

Annual fall meeting, 1st, Gatlinburg, Tenn., Sept. 10-12; with abstracts of papers. Coal Age 67:64-7 O '62

1963 membership directory. Min Eng 15:91-217 Jl '63

SME fall meeting and Rocky Mountain minerals conference, Salt Lake City, Utah, Sept. 11-13; abstracts of papers. Min Eng 15:53-7 Ag; 46 S '63

Society of petroleum engineers

Annual fall meeting, 57th, Los Angeles, Oct. 7-10; program and abstracts of papers. J Pet Tech 14:988-90+ S '62

Annual meeting, Dallas, Feb. 24-28; abstracts of papers. J Pet Tech 15:55-6+ Ja '63

Annual meeting, 50th, New Orleans, Oct. 6-9; program of technical papers. J Pet Tech 15:606-9 Je '63

50th anniversary fall meeting, New Orleans, Oct. 6-9; with program and abstracts of papers. J Pet Tech 15:965-87 S '63

AMERICAN institute of nutrition

Annual meeting, 27th, Atlantic City, N.J. April 16-20; proceedings. J Nutrition 80:447-58 Ag '63

AMERICAN institute of physics

AAPT-AIP regional counselor program; a counselor's report. G. L. Hollingsworth. Phys Today 16:50-2+ F '63

Annual report. il Phys Today 16:39-52 My '63

New AIP handbook. D. E. Gray. Phys Today 16:40-2 Jl '63

AMERICAN institute of plant engineers

Annual meeting, 9th, Chicago, Jan. 27. Plant Eng 17:148-9 Mr '63

Chapter activities. Plant Eng 17:140-2 F '63

National officers installed. Plant Eng 17:143-4 Ag '63

AMERICAN institute of steel construction

American institute of steel construction. il Pub Works 94:100-1 Ja '63

Annual engineering conference, Tulsa. Eng N 170:20-1 My 2 '63

Nine buildings receive A.I.S.C. awards. il Arch Rec 134:14-15 S '63

Workshop-critique of awards. il plans diags Prog Arch 43:150-61 N '62

AMERICAN machine tool distributors association

Annual meeting, 38th, Detroit, Oct. 24-26. Automotive Ind 127:83+ N 15 '62

Spring meeting, 39th, White Sulphur Springs, W. Va., April 7-10. Am Mach/Metalworking Manuf 107:60 Ap 29 '63

Spring meeting, 39th, White Sulphur Springs, W.Va., April 7-10; abstracts of papers. Mach 69:142-3 My '63

AMERICAN mining congress

Annual meeting, New York, Dec. 3. Min Cong J 48:35-6 D '62

Coal convention, Pittsburgh, May 5-8; abstracts of papers. Coal Age 68:104-13 Je '63

Coal convention, Pittsburgh, May 5-8; program. Min Cong J 49:56-61 Mr '63

Coal convention, Pittsburgh, May 5-8; with program and abstracts of papers. Min Cong J 49:33-43 Ap; 51-64 Je '63

Coal division conference, Pittsburgh, Oct. 16; with abstracts of committee reports. Min Cong J 48:64-6 D '62

Convention, San Francisco, Sept. 24-27. Rock Prod 65:80+ N '62

Declaration of policy adopted at San Francisco, Sept. 24-27. Min Cong J 48:27-33 N '62

AMERICAN mining congress—*Continued*
- Meeting, Los Angeles; abstracts of papers. Eng & Min J 164:116+ O '63
- Metal mining and industrial minerals convention and exposition, San Francisco, Sept. 23-28; with abstracts of papers. Min Cong J 48:50-64D N '62; il Eng & Min J 163:84-90 N '62; Pit & Quarry 55:90-2+ D '62
- Metal mining-industrial minerals convention, Los Angeles, Sept. 15-18; with program. Min Cong J 49:41-53 Ag '63

AMERICAN nuclear society
- Meeting, Boston. Nucleonics 20:74+ S '62

AMERICAN oil chemists society
- Annual fall meeting, 36th, Toronto, Oct. 1-4; abstracts of papers. Soap & Chem Spec 38:47-9 N '62
- Annual fall meeting, 37th, Minneapolis, Sept. 30-Oct. 2; with program, list of exhibitors; abstracts of papers. Am Oil Chem Soc J 40:sup4+ S '63
- Annual meeting, 54th, Atlanta, April 22-24; with program, president's report and abstracts of papers. Am Oil Chem Soc J 40:sup8+ Mr; sup 10+ Ap; 6-7+ Je; sup5+ Jl '63
- Annual report of the Smalley committee, 45th. Am Oil Chem Soc J 40:298-9 Jl '63 .
- Fall meeting, 36th, Toronto; with addresses of presidents. Am Oil Chem Soc J 39:sup 4-5+ N; sup4+ D '62
- Meeting, Toronto, Oct. 1; program. Am Oil Chem Soc J 39:sup 12+ S '62
- New method for grading collaborators in the Smalley check sample series. L. A. Baumann. Am Oil Chem Soc J 40:sup 13-14+ Ag '63
- Report of the commercial fats and oils analysis committee, 1963. Am Oil Chem Soc J 40:596-602 O '63
- Report of the fat analysis committee, 1962. Am Oil Chem Soc J 39:431-4 O '62
- Report of the spectroscopy committee, 1961-62. Am Oil Chem Soc J 40:sup 14+ Mr '63

AMERICAN petroleum institute
- API readies first travel-ad program. Oil & Gas J 61:77 Mr 18 '63
- Annual meeting, 42d, Chicago, Nov. 12-14. Oil & Gas J 60:95-6 N 12; 131-52 N 19 '62
- Changing world of API. Pet Management 34:21-2 N '62
- This is your API. Oil & Gas J 60:123-38 N 12 '62
- Where is API headed? interview with F. Ikard. C. La Motte. Oil & Gas J 61:42-5 Mr 11 '63

AMERICAN pharmaceutical association
- Scientific section meeting, Miami Beach, May 12-17; abstracts of papers. Am Perfumer 78:30-3+ Jl '63

AMERICAN photoengravers association
- Annual meeting, Washington, Oct. 14-17. Inland Ptr/Am Lithogr 150:94-5 N '62

AMERICAN physical society
- APS-AAPT joint meeting, New York, Jan. 23-26. Phys Today 16:78-80 Mr '63

AMERICAN potash and chemical corporation
- Kirkpatrick award for chemical engineering achievement. Chem Eng 70:46 S 30 '63

AMERICAN power conference
- Annual meeting, 25th, Chicago, March 26-28. Power Eng 67:68 F '63; Chem Eng 70:60 Ap 29 '63; Eng N 170:46-7 Ap 4 '63
- Annual meeting, 25th, Chicago, March 26-28; abstracts of papers. Combustion 34:31-8 My; 46-9 Je; 35:41-4 O '63
- Annual meeting, 25th, Chicago, March 26-28; program. Combustion 34:49-52 Mr '63; Elec Eng 82:sup30A-2A Mr '63
- Conference, Chicago, March 26-28; abstracts of papers. Elec World 159:64-7+ Ap 8 '63; Power Eng 67:34-8 My; 58-61 Je '63

AMERICAN public gas association
- Annual convention, 1st, Washington, Oct. 29-30. Gas Age 129:33-6 D '62

AMERICAN public health association
- Annual meeting, 91st, Kansas City, Nov. 11-15; preliminary program; list of exhibitors. Am J Pub Health 53:1458-1546 S '63
- Committees 1962-1963. Am J Pub Health 53:303-32 F '63
- Fellowship in the American public health association. Am J Pub Health 53:301-2 F '63
- Relationships of professional societies and industry to the American public health association. C. G. King. Am J Pub Health 53:712-16 My '63
- Report of the chairman of the executive board to the governing council 1961-1962. J. D. Porterfield. Am J Pub Health 53:97-103 Ja '63
- Report of the chairman of the technical development board to the governing council, 1961-1962. Am J Pub Health 53:291-300 F '63

AMERICAN public power association
- Annual convention 20th, Cleveland, April 30-May 2. Elec World 159:92-3 My 20 '63
- Story of APPA; locally-owned utilities association. J. P. Gallagher. il Power Eng 66:41-3 D '62

AMERICAN public works association
- Annual congress and equipment show, New Orleans. Civil Eng 32:88 N '62
- News bulletins. Published in monthly numbers of Public works

AMERICAN radio relay league
- Meeting, Portland, Sept. 1-9, program. Q S T 46:20-3 Ag '62

AMERICAN road builders association
- American road builders association. il Pub Works 94:119-20 F '63
- Annual convention, Chicago, Feb. 24-27. Pit & Quarry 55:90-2+ My '63
- Annual convention, 61st, Chicago. Eng N 170:22-3 Mr 7 '63

AMERICAN rocket society
- Annual solid propellant rocket conference, 4th, Philadelphia, Jan. 30-Feb. 1; with abstracts of papers. Astronautics & Aerospace Eng 1:97-101 Ap '63
- 32 years of ARS history. G. E. Pendray. Astronautics & Aerospace Eng 1:124-8 F '63

AMERICAN society for clinical nutrition
- Annual meeting, 3d, Atlantic City, April 27; program and abstracts of papers. Am J Clinical Nutrition 12:330-8 Ap '63

AMERICAN society for engineering education
- Annual meeting, Philadelphia. Civil Eng 33:43-4 Ag '63

AMERICAN society for metals
- ASM's president for 1962-63, Robert J. Raudebaugh. R. A. Kozlik. Metal Prog 83:88-9 Je '63

AMERICAN society for quality control
- Annual convention and exhibit, 17th, Chicago, May 20-22; program and list of exhibitors. Ind Quality Control 19:37-40+ My '63
- Annual report of the board of directors. Ind Quality Control 19:48-53 N '62
- Increasing significance of total quality control; president's address. A. V. Feigenbaum. Ind Quality Control 20:4-9 O '63
- Long range planning guide. L. Bass. Ind Quality Control 20:4-6 S '63
- 1963-64 organization manual. Ind Quality Control 20:21-8 O '63
- 1963-64 society officers, regional executive directors, and regional directors. Ind Quality Control 20:34-5 Ag '63

AMERICAN society for testing and materials
- ASTM committee B-8 meeting, Washington, Sept. 25-27. Plating 49:1298+ D '62
- ASTM committee D-1 on paints and related products. Ind Finishing 39:70+ D '62
- ASTM committee E-21 on space simulation organized. il Materials Res & Stand 3:579-80 Jl '63
- ASTM, our heritage and our responsibilities; president's address. A. C. Webber. Materials Res & Stand 3:669-73 Ag '63
- ASTM's analytical data projects. W. Pepper, jr. il diags Materials Res & Stand 3:646-52 Ag '63
- Annual meeting, Atlantic City. Eng N 171:30-1 Jl 4 '63
- Annual meeting, 66th, Atlantic City, June 24-28; with abstracts of papers. Pit & Quarry 56:80-3 O '63
- Annual meeting, 66th, Atlantic City, June 23-28; program and abstracts of papers. Materials Res & Stand 3:384-5+, 506-7, 653-9 My-Je, Ag '63
- Committee C-5 on carbon and graphite products organized. Materials Res & Stand 3:743-4 S '63
- Committee D-11 on rubber and rubber-like materials annual meeting, Atlantic City, N. J. June 26-28. Rubber Age 93:774-6 Ag '63; Rubber World 148:78-80 Ag '63
- Committee D-11 on rubber and rubberlike materials meeting, Montreal, Feb. 6-8. Rubber Age 92:906-7 Mr '63
- Honors and awards presented at annual meeting luncheon. Materials Res & Stand 3:660-8 Ag '63
- New ASTM national officers elected. Materials Res & Stand 3:572-4 Jl '63
- New ASTM publications. Published in monthly numbers of Materials research and standards
- 1962; year of decision and progress. Materials Res & Stand 3:41-3 Ja '63

AMERICAN society of civil engineers
- ASCE environmental engineering conference, Atlanta, Feb. 25-28; program. Civil Eng 33:55-9 Ja '63
- ASCE philosophy of engineering unity. Civil Eng 33:31 Jl '63
- Annual meeting and structural engineering conference, San Francisco, Oct. 7-11 and Honolulu, Oct. 14-16; program. Civil Eng 33:64-73 Ag '63

AMERICAN society of civil engineers—*Cont.*
Annual meeting, San Francisco; with abstracts of papers. Eng N 171:19-21 O 17 '63
Century and a decade of professional stewardship. W. H. Wisely. Civil Eng 32:31 O '62
Challenging assignment; president's inaugural address. E. Friedman. Civil Eng 32:31-2 N '62
ENR's editor will head ASCE. Eng N 171:50-2 O 17 '63
Environmental engineering conference, 1st, Atlanta, Feb. 25-28. Civil Eng 33:40-5 Ap '63; Water & Sewage Works 110:185 My '63
Meeting, Milwaukee. Eng N 170:42-3 My 23 '63
Review of the Technical divisions of ASCE. E. Friedman. Civil Eng 33:52-3 Je '63
Six elected to honorary membership. Civil Eng 32:66-8 O '62
Winter conference, Atlanta, Ga; with abstracts of papers. Eng N 170:22-3 Mr 7 '63

AMERICAN society of heating, refrigerating and air-conditioning engineers
ASHRAE officers, directors, committeemen. ASHRAE J 5:90-1 Ap; 101-2 Ag '63
Annual meeting, 70th, Milwaukee, June 24-26; program and abstracts of papers. ASHRAE J 5:56-72 Je '63
Annual meeting, 70th, Milwaukee, June 24-26; with abstracts of papers. ASHRAE J 5:50-61 Ag '63
Philadelphia chapter air conditioning seminar, 9th. ASHRAE J 5:92-3 My '63
Research year in review. W. T. Pentzer. ASHRAE J 5:46+ Je '63
Semiannual meeting and exposition, New York, Feb. 11-14; program, floor plans, and list of exhibitors. Air Cond Heat & Ven 60:153-60 Ja '63
Semiannual meeting, New York, Feb. 11-14; program and abstracts of papers. ASHRAE J 5:60-92 Ja; 50-68 Mr '63

AMERICAN society of lubrication engineers
Groundbreaking ceremonies for headquarters building, Chicago, July 23. Lub Eng 19:316-17 Ag '63

AMERICAN society of mechanical engineers
ASME elects members to grade of Fellow. Mech Eng 84:110-11 D '62; 85:91+ Ja; 101-3 F; 108 Ap; 100-1 Je; 91 Jl; 84-5 Ag '63
ASME finances, 1961-1962; 1960-1961. Mech Eng 85:110-11 Ap '63
ASME honors 20 engineers, 1962 winter annual meeting. Mech Eng 85:100-3 Ja '63
ASME officers nominated at summer annual meeting. Mech Eng 85:90-4 Ag '63
ASME '62; report from the president. C. H. Shumaker. Mech Eng 85:125-8 Ja '63
Annual meeting, New York, Nov. 25-30; abstracts of papers. Combustion 34:37-41 Ja; 41-5 F '63
Council meeting, New York, Nov. 25-26. Mech Eng 85:106-8 F '63
Council meetings, Denver, June 10. Mech Eng 85:96-9 S '63
Decisions that face ASME. C. H. Shumaker. Mech Eng 84:26-9 D '62; Discussion. 85:86 Ap '63
Dollars and sense; Society's financial situation. C. H. Shumaker. Mech Eng 85:22-4 Ja '63
Fuels today; Fuels division symposium, 1962. bibliog il Mech Eng 85:38-45 Ja; 38-45 F '63
Inside ASME. M. Barrangon. Published in monthly numbers of Mechanical engineering
International conference on production engineering research; Pittsburgh, Sept. 9-12; abstracts of papers. Am Mach/Metalworking Manuf 107:85-92 S 2 '63 (reprints 40c)
1962 winter annual meeting; papers available. Mech Eng 85:104-10 Ja '63
Petroleum mechanical engineering national conference, 18th, Tulsa, Okla., Sept. 22-25; program. Mech Eng 85:88-9 Ag '63
Regional student conference; list of papers and prizes. Mech Eng 85:100-1 O '63
Student design contest. diags Mech Eng 84:56-9 D '62
Winter annual meeting, 83d, New York, Nov. 25-30. Mech Eng 85:92-112 Ja '63; Power Eng 67:52-4 Ja '63
Winter annual meeting, Philadelphia, Nov. 17-22; with program. Mech Eng 85:90-2 S; 113-36 O '63
Woman's auxiliary winter annual meeting, New York, Nov. 25-30. Mech Eng 85:111-12 Ja '63
See also
Design engineering conference
National power conference

Aviation and space division

Conference, Washington, June 26-28; papers. Mech Eng 84:28-33 O; 40-5 N; 34-41 D '62; 85:30-5 Ja; 28-33 F; 48-55 Mr '63

Rubber and plastics division

Meeting, New York, Nov. 25-30; with abstracts of papers. Plastics Tech 9:52 Ja '63
Meeting, New York, Nov. 29-30; with abstracts of papers. Rubber Age 92:592-3 Ja '63; Rubber World 147:96 Ja '63

AMERICAN society of naval engineers
Joint SAE-ASNE aeronautical meeting, Washington. Naval Eng J 75:303-9 My '63; S A E J 71:116-19 Je '63

AMERICAN society of perfumers
Annual symposium, 9th; new horizons in the world of perfumery. Am Perfumer 78:33-55 Je '63
Annual symposium, 9th, New York, April 18. Soap & Chem Spec 39:287-8 My '63

AMERICAN society of sanitary engineering
Annual meeting, 56th, Little Rock, Ark. Air Cond Heat & Ven 59:95-6 N '62

AMERICAN society of tool and manufacturing engineers
Communication and education; annual report. Tool & Manuf Eng 50:109-20 My '63
Engineering conference and tool exposition, Chicago, April 29-May 3; program, list of exhibitors, products on display. Tool & Manuf Eng 50:129-75 Ap '63
Engineering conference and tool show, Chicago, April 29-May 3; program. Am Mach/Metalworking Manuf 107:135 Ap 1 '63
Engineering conference and tool show, Chicago, April 29-May 3; with program and list of exhibitors. Iron Age 191:132+ Ap 18; 105 Ap 25 '63
Tool exposition and conference, Chicago, April 19-May 3. Steel 152:137-9 Ap 22 '63
Tool exposition and conference, Chicago, April 29-May 3; products on display. il Mach 69:119-44 Ap '63

AMERICAN standards association
Annual meeting, New York, Dec. 13. Mag of Stand 34:35-40 F '63
Electrical standards board defines policy on definitions. Mag of Stand 34:213-14 Jl '63
National conference on standards, 13th, New York, Feb. 18-20; program. Combustion 34:29 D '62
What is ASA? C. E. Hilton. Mag of Stand 33:310-12 O '62
What is ASA? V. G. Grey. Mag of Stand 33:244-5 Ag '62
What is ASA? the sectional committee method. S. D. Hoffman. Mag of Stand 33:276-8 S '62
Why ASA? C. Ainsworth. Materials Res & Stand 3:492-3 Je' 63

AMERICAN telephone and telegraph company
AT&T builds a bombproof system. il Eng N 171:19 Ag 29 '63

AMERICAN textile machinery association
Annual meeting, Boston, Feb. 28. Mod Textiles Mag 44:46 Ap '63

AMERICAN water works association
Amendments to bylaws in 1962. Am Water Works Assn J 54:1549-52 D '62
AWWA directory, 1963; reference edition. Am Water Works Assn J 55:1-206 pt 2 O '63
Annual conference, 82d, Philadelphia, June 17-22. Am Water Works Assn J 54:sup35-6+, 1561-72 Ag, D '62; Civil Eng 32:80 Ag '62; Water & Sewage Works 109:sup9A+ Ag '62; Eng N 168:21 Je 28 '62
Annual conference, 83d, Kansas City, May 19-24. Eng N 170:18-19 My 30 '63
Annual conference, 83d, Kansas City, May 19-24. Water & Sewage Works 110:294-5 Ag; sup7A+ S '63
Annual conference, 83d, Kansas City, May 19-24; preliminary technical program. Water & Sewage Works 110:169-70 My '63
Annual conference, 83d, Kansas City, May 19-24; program, exhibit floor plan and preliminary list of exhibitors. Am Water Works Assn J 55:sup 35-6+ Ap '63
Annual conference, 83d, Kansas City, May 19-24; with program, list of exhibitors and abstracts of papers. Water Works Eng 116:359-62, 474-5+, 484-5+, 562-3, 640 My-Ag '63
California section annual conference, 43d, Santa Monica, Oct. 24-26; program and list of exhibitors. Water & Sewage Works 109:sup7A+ O '62
Committee reports, publications, auditors report for the year ending Dec. 31, 1962; membership awards, membership growth. Am Water Works Assn J 55:496-538 Ap '63
Directory, membership list, etc. Am Water Works Assn J 54:1-259 pt 2 N '62
Indiana section annual meetig, 55th, Indianapolis, Feb. 13-15. Water & Sewage Works 110:202 My '63
Looking to AWWA's future. W. D. Hurst. Am Water Works Assn J 55:1-3 Ja '63

AMERICAN water works association—*Cont.*

Michigan section annual meeting, 23d, Lansing, Sept. 12-14. Water & Sewage Works 109:442-3 N '62

New Jersey section fall meeting, 27th, Atlantic City, Sept. 26-29. Water & Sewage Works 109:480-1 D '62

Water purification division golden anniversary. Am Water Works Assn J 55:807-12 Jl '63

AMERICAN welding society

Annual meeting and welding show, Philadelphia, April 22-26; list of exhibitors. Welding Eng 48:46-7 Ap '63

Annual meeting and welding show, Philadelphia, April 22-26; program. Iron Age 191:98-100 Ap 4 '63

Annual meeting, 44th, and AIEE electric welding conference, Philadelphia, April 21-25; program. Welding J 42:42-5 Ja '63

Annual meeting, 44th, and welding exposition, Philadelphia, April 22-26; with program and list of exhibitors. Welding J 42:312+ Ap '63

Annual meeting, 44th, Philadelphia, April 22-26; abstracts of papers. Steel 152:71-2 Ap 15 '63

Annual meeting, 44th, presidential addresses and list of officers elected. Welding J 42:504-9 Je '63

Fall meeting, Boston, Sept. 30-Oct. 3; with program. Welding J 42:731-2+ S '63

Fall meeting, Milwaukee, Oct. 1-4. Welding J 41:1021-2+ N '62

National fall meeting, Boston, Sept. 30-Oct. 3; program. Welding J 42:512-14 Je '63

National officers for 1963-64 nominated. Welding J 41:1131-5 D '62

Welding show news, Philadelphia, April 23-25. Welding J 42:213-16 Mr '63

AMERICAN zinc institute

Meeting, Chicago, April 29-May 1; abstracts of papers. Eng & Min J 164:264+ Je '63

AMERICIUM

Analysis

Separation of americium from other elements; application to the purification and radiochemical determination of americium. F. L. Moore. bibliog Anal Chem 35:715-19 My '63

Isotopes

Americium-241 sources for analytical applications. J. E. Strain and G. W. Leddicotte. Nucleonics 20:90 N '62

Determination of americium-243 in curium-244. C. J. Banick and others. Anal Chem 35:1312-13 Ag '63

AMERIPOL CB. See Rubber, Artificial

AMIDES

Acidity of hydrocarbons; an HMO examination of exchange rates of methylarene-α-d's with lithium cyclohexylamide. A. Streitwieser, jr. and others. bibliog Am Chem Soc J 85:1761-3 Je 20 '63

Acidity of hydrocarbons; rates of exchange of polycyclic methylarene-α-d's with lithium cyclohexylamide. A. Streitwieser, jr. and W. C. Langworthy. bibliog diag Am Chem Soc J 85:1757-61 Je 20 '63

Castor-based derivatives; synthesis of some amides. T. H. Applewhite and others. bibliog Am Oil Chem Soc J 40:101-4 Mr '63

Cyclic organic esters and amides derived from acids of phosphorus. R. S. Edmundson. Chem & Ind p 1770-8 bibliog(p 1771-8) O 13 '62

Intramolecular bifunctional catalysis of amide hydrolysis. H. Morawetz and J. Shafer. Am Chem Soc J 84:3783-4 O 5 '62

Kinetics and equilibria of amide formation in aqueous media. H. Morawetz and P. S. Otaki. bibliog Am Chem Soc J 85:463-8 F 20 '63

Lithium nitride, acid chlorides react. Chem & Eng N 41:46 Ap 8 '63

Mass spectrometry in structural and stereochemical problems; mass spectral fragmentation processes and hydrogen transfer reactions of amides and amines. Z. Pelah and others. bibliog Am Chem Soc J 85:2470-83 Ag 20 '63

Mechanisms of acid hydrolysis of carboxylic acid esters and amides. R. B. Martin. bibliog Am Chem Soc J 84:4130-6 N 5 '62

N,N-bis(2-acyloxyethyl) amides of long chain fatty acids as plasticizers. F. C. Magne and others. bibliog Am Oil Chem Soc J 40:541-5 O '63

Participation of the amide group in the solvolysis of phosphoric acid esters; phosphotriesters in alkaline media. C. Zioudrou and G. L. Schmir. bibliog Am Chem Soc J 85:3258-64 O 20 '63

Positive halogen compounds; structure and reactivity in halogenation with some further N-haloamides. C. Walling and A. L. Rieger. bibliog Am Chem Soc J 85:3134-6 O 20 '63

Potentiometric titration of acids in an *N,N*-dimethyl fatty amide. C. A. Reynolds and others. bibliog Anal Chem 35:973-6 Jl '63

Protonation of amide groups of polypeptides by helix-breaking solvents. S. Hanlon and others. Am Chem Soc J 85:2024-5 Jl 5 '63

Thermodynamic data for the formation of molecular complexes between phenyl substituted amides and iodine. R. L. Carlson and R. S. Drago. Am Chem Soc J 85:505-8 Mr 5 '63

Transition state differences between amides and esters in chymotrypsin-catalyzed hydrolysis. W. F. Sager and P. C. Parks. Am Chem Soc J 85:2678-9 S 5 '63

AMIDINES

Nonaqueous potentiometric titration of acylamidines and related compounds. B. H. Beggs and R. D. Spencer. bibliog Anal Chem 34:1590-4 N '62

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AMINE oxides

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AMINES

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Amine exchange reactions; Mannich bases from aromatic amines. J. C. Craig and M. Moyle. Chem & Ind p690 Ap 27 '63

Amine treating of sour gas; good riddance to H_2S; process flowsheet. P. Brennan. il Chem Eng 69:94-6 O 29 '62

Approach to applicable inorganic polymers; interaction of diamines and boron halides. G. Gerrard and others. bibliog J Ap Chem 13:239-49 Je '63

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Determination of primary and secondary aliphatic amines by near-infrared spectrophotometry. F. H. Lohman and W. E. Norteman, jr. Anal Chem 35:707-11 My '63

Effect of gases on the conductivity of organic solids; the *p*-chloranil-amine interaction. P. J. Reucroft and others. bibliog diags Am Chem Soc J 85:2059-62 Jl 20 '63

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Ethylenediamine
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Cystine
Glutamic acid
Histidine
Hydroxyproline
Isoleucine
Lysine
Methionine
Phenylalanine
Serine
Thiodialanine
Tryptophan
Tyrosine

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Hillside architecture
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Pavilions
Planetariums
Police stations
Prisons
Public buildings
Publishing buildings
Recreation buildings
Remodeling (architecture)
Shelters
Skis and skiing—Stations, lodges, etc.
Stadiums
Store buildings
Studios
Telephone company buildings
Tennis courts, Indoor
Theaters
Vaults (architecture)
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Detroit
Houston, Texas
Ibadan, Nigeria
Lomé, Togo
London
Mexico (city)
Milwaukee
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New York (city)
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Electric utilities

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Gas, Natural

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Bridges
Building laws and regulations
Canals
Cement industry and trade
Electric lines
Electricity supply
Gas, Natural
Geology
Hydroelectric plants
Iron mines and mining
Irrigation
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Electricity supply
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Metal trade
Mineral industries
Mines and mineral resources
Mining law
Moving picture industry
Niobium mines and mining
Paint industry and trade
Paper and pulp mills
Paper board industry
Patent laws and regulations
Petroleum industry and trade
Petroleum laws and regulations
Petroleum pipe lines
Petroleum products pipe lines
Plastics industries
Potash mines and mining
Railroads
Roads
Scientific research
Soap industry and trade
Space research
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Clay
Enamel and enameling
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Glass manufacture
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Cleaning compositions
Drugs
Emulsifiers
Indicators and test papers
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Dye analysis
Electrochemical analysis
Fluorometric analysis
Gas analysis
Indicators and test papers
Metallurgical analysis
Microanalysis
Mineralogical analysis
Phosphorimetry
Plants—Chemical analysis
Precipitation (chemistry)
Radiochemical analysis
Sampling
Spectrum analysis
Sugar analysis

also subdivision Analysis under special subjects, e.g.
Benzenesulfonates
Carbon dioxide
Flue gas
Formaldehyde
Fuel
Gasoline
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Colloids
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Diffusion
Dissociation
Equation of state
Evaporation
Flocculation
Ions
Liquids
Mass (chemistry)
Molecular weights
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Valence
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Cellulose
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Cosmetics
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Dyes and dyeing—Chemistry
Electrochemistry
Emulsions
Extraction processes
Filters and filtration (technical chemistry)
Fuel
Glass manufacture
Paper
Paper making
Petroleum distillation
Petroleum refining
Pottery
Refractory materials
Refrigerants
Rubber
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Cadmium chloride
Calcium chloride
Carbon tetrachloride
Carbonyl chloride
Cesium chloride
Cobalt chlorides
Copper chlorides
Gallium chlorides

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Blasting
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Bridges
Building
Cofferdams
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Dams
Docks
Drainage
Dredging
Drilling and boring (earth and rocks)
Dry docks
Embankments
Excavation
Flood control
Foundations

CIVIL engineering—See also—*Continued*
Highway engineering
Hydraulic engineering
Hydraulic filling
Marine engineering
Masonry
Mechanical engineering
Mining engineering
Piers
Piles and pile driving
Pipe laying
Public works
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CLEANING—See also—*Continued*
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Condensers (steam)
Containers
Evaporators
Factories
Heat exchangers
Lubrication and lubricants (cutting and grinding)
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Collagen

Dispersion

Electrophoresis

Emulsions

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Particles

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Dichroism
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Metal coloring
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Pigments
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Concrete
Food
Oils and fats
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Coal mines and mining

Gas, Natural

Gas, Natural—Pipe lines

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Hydroelectric plants

Mines and mineral resources

Molybdenum mines and mining

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Petroleum

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Electrohydraulic control

Electronic control

Electropneumatic control

Feedback control systems

Governors (machinery)

Hydraulic control

Liquid level control

Machinery, Automatic

Magnetic control

Numerical control

Pneumatic control

Servomechanisms

Telemetering

Temperature—Regulation

Vacuum tubes—Control uses

also subdivision Control and Control equipment under special subjects, e.g.

Air compressors

Air conditioning equipment

Airplane engines

Airplanes

Atomic power plants

Bakers and bakeries

Blast furnaces

Boiler plants

Boilers

Cement plants

Chemical plants

Cranes, derricks, etc.

Crushing machinery

Diesel engines

Diesel engines, Marine

Electric plants (central stations)

Elevators

Feeders

Food machinery

Furnaces, Forging

Gas burners

Gas companies

Gas turbines

Gas works

Gasoline plants

Guided missiles

Heat exchangers

Helicopters

Honing machines

Hydroelectric plants

Lathes

Machine tools

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Metal working plants

Metallurgical plants

Milling machines

Nuclear reactors

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Paper and pulp mills

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Petroleum refineries

Plating shops

Presses

Printing presses

Pumping machinery

Pumping machinery, Electric

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See also
Aeroelasticity
Bending
Bending moment
Compressibility
Creep of materials
Deformation (mechanics)
Fatigue in metals
Friction, Internal
Hysteresis (mechanics)
Photoelasticity
Plasticity
Rheology
Strains and stresses
Torsion

ELASTOMERS. See Rubber, Artificial

ELBOWS, Pipe. See Pipe elbows

EL DORADO HILLS, California

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See also
Brakes, Electric
Clocks, Electric
Commutators
Electric alarms
Electric batteries
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Electric circuit breakers
Electric coils
Electric controllers
Electric converters
Electric current limiters
Electric equipment

ELECTRIC apparatus and appliances—See also —*Continued*

Electric furnaces
Electric fuses
Electric generators
Electric industries
Electric instruments
Electric inverters
Electric lamps
Electric machinery
Electric meters
Electric motors
Electric protective apparatus
Electric rectifiers
Electric switchgear
Electric transformers
Electricity in mining
Electricity on the farm
Electromagnets
Electronic apparatus and instruments
Oscillators
Photoelectric cells
Potentiometers
Radio apparatus
Relays
Selsyn apparatus
Spark plugs
Storage batteries
Transducers
Voltage regulators

Directories

See Electric apparatus industry—Directories

Manufacture

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Merchandising

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Electric utilities—Appliance selling

Standards

See also
Electric standards

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Electric plants (central stations)—Control equipment
Electric switchgear
Electrohydraulic control
Electronic control
Radio control
Selsyn apparatus
Servomechanisms
Thyratron
Valves—Electric control
Voltage regulation

also subdivision Control and Control uses under special subjects, e.g.

Airplanes
Electric heating
Electric motors
Electric motors, Alternating current
Electric motors, Direct current
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Electric lines
Electric plants—Interconnection
Electric rectifiers
Electric service, Rural—Cooperative lines
Electric substations
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Electric transformers
Electric transmission
Electric wiring
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Electric contractors
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Institute of electrical and electronics engineers

Institution of electrical engineers

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Electric control

Electric distribution

Electric driving

Electric heating elements

Electric plants (central stations)—Equipment

Electric switchgear

Electric transmission

Electricity in mining

Electricity on the farm

also subdivision Electric equipment under special subjects, e.g.

Airplanes

Airports

Apartment houses

Automobiles

Chemical plants

Coal mines and mining

Cranes, derricks, etc.

Factories

Foundries

Office buildings, Industrial

Paper and pulp mills

Petroleum refineries

Potteries

Prisons

Pumping stations

Rolling mills

School buildings

Ships

Steel works

Textile mills

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Solenoids

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Electric furnaces, Metallurgical
Electrodeposition of metals
Electroplating
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also subdivision Electrometallurgy under special subjects, e.g.
Chromium metallurgy
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See also
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Kerr cell
Oscillographs, Cathode ray

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Transducers
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Age and employment

Arbitration, Industrial

Building trades—Labor conditions

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Job satisfaction

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Labor turnover

Medical service, Industrial

Municipal employees

Physical examinations

Sickness

Steel workers

Supervisory workers

Trade secrets

Wages

Woman—Employment

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Cotton mills

Electric utilities

Food factories

Gas works

Gasoline service stations

Oil companies

Paper and pulp mills

Paper box factories

Petroleum refineries

Plumbing shops

Printing offices

Rock products plants

Sewage disposal plants

Waterworks

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Foremen
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Metallurgical education
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Audio engineering society
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Engineers council for professional development
Engineers joint council
Fédération Européenne des associations nationales d'ingénieurs
Illuminating engineering society
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Chemical engineers
Civil engineers
Consulting engineers
Electric engineers
Engineering ethics
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Engineers council for professional development
Engineers joint council
Industrial engineers
Mechanical engineers
Mining engineers
Municipal engineers
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Sanitary engineers
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Gasoline industry
Hydroelectric plants
Oil fuel industry
Patent laws and regulations
Petroleum
Petroleum industry and trade
Petroleum pipe lines
Plastics industries
Radio communication
Scientific research
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Machinery
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Helium
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Airplane industry and trade
Atomic power plants
Atomic research
Automobile industry and trade
Bridges
Building
Building laws and regulations
Chemical industries
Coal mines and mining
Coal trade
Colleges and universities
Electric apparatus industry
Electric industries
Electric lines
Electric railroads
Electricity supply
Electronics industry
Engineering
Engineering education
Engineers
Gas, Natural—Pipe lines
Gas industry
Highway transportation
Housing
Hydroelectric plants
Income tax
Iron industry and trade
Labor laws and regulations
Lead mines and mining
Machine tool industry
Machinery industry
Merchant marine
Moving picture industry
Office equipment industry
Petroleum industry and trade
Petroleum products pipe lines

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Pharmaceutical research
Plastics industries
Radio broadcasting
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Abrasives

Grinding machines

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Inspection
International management congress
Inventories
Labor productivity
Linear programming
Machine shop management
Machinery, Replacement of
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Operations research
Organization in industry
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Public relations
Purchasing
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Sports, Lighting for
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Airplanes
Airport buildings
Airports
Auditoriums
Bakers and bakeries
Ballrooms
Bank buildings
Bowling alleys
Bridges
Capitols
Churches
College buildings
Electric plants (central stations)
Factories
Gardens
Garment factories
Gasoline plants
Golf links
Gymnasiums
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Laboratories
Library buildings
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Machine shops
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Mens stores
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Signs
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Television studios
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Glass as lubricant
Graphite
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Oil films
Oil mists
Oil seals

also subdivision Lubrication under special subjects, e.g.

Air compressors
Airplane engines
Automobile engines
Automobiles
Bearings
Bearings, Ball
Bearings, Roller
Compressors
Conveying machinery
Diesel engines
Diesel engines, Marine
Gas compressors
Gas turbines, Aircraft
Gearing
Locomotives
Machine tools
Motor boat engines, Outboard
Motor truck engines
Motor trucks
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Rolling mills
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Turbines
Wire rope

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Mechanical handling
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Arbors and mandrels
Assembling methods
Bending
Broaching
Centering (machine work)
Chucks
Dies
Drafting room practice
Drilling and boring (metal working, etc.)
Forging
Foundry practice
Gages
Grinding
Grinding machines
Grooving
Hard facing
Indexing (machine work)
Inspection

MACHINE shop practice—See also—*Continued*
Lapping
Lathes
Machine tools
Machinery
Metal cutting
Milling
Pattern making
Riveting
Sheet metal work
Stamping
Steel works
Tolerance
Turning
Welding

also subdivision Manufacture under special subjects, e.g.
Automobile engines
Bearings
Bearings, Roller
Cams
Carburetors
Crankshafts
Cylinders (engines, etc.)
Diesel engines
Electric motors
Gas turbines, Aircraft
Gearing
Guided missiles
Keys and keyways (machinery)
Motor trucks
Motor trucks, Industrial
Pistons
Rockets
Rolls (rolling mills)
Shafts
Space vehicles
Springs (mechanism)
Trailers

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Machine tools

Layout

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Keys and keyways (machinery)
Knitting machines
Labeling machines
Lathes
Looms
Lubrication and lubricants
Machine shop practice
Machine tools
Marking machines
Mechanical handling
Metal working machinery
Milling machines
Mining machinery
Molding machines
Packaging machinery
Paper cutting machines
Paper making machinery
Pattern making
Paving machines
Pins, Machinery
Planing machines
Plating machinery
Pneumatic hammers
Pneumatic machinery
Polishing machines
Power transmission
Presses
Printing machinery
Printing presses
Pulleys
Pumping machinery
Pumps
Refrigeration and refrigerating machinery
Riveting machines
Road making machinery
Rollers
Rolls
Screw machines
Screwdriving machines
Shafting
Shafts
Shapers
Shoveling machines
Spinning machinery
Springs (mechanism)
Steam turbines
Tamping machines
Testing machines
Threading machines
Time study (of machinery)
Tools
Trenching machinery
Turbines

MACHINERY—See also—*Continued*
Typesetting machines
Valves
Washers (machinery)
Welding machines
Winding machines
Wire forming machines
Woodworking machinery

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See Alinement of machinery

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Friction
Gearing—Design
Keys and keyways (machinery)
Machine tools—Design
Machinery, Kinematics of

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Fourier series
Functions
Geometry
Graphic methods
Green function
Groups, Theory of
Harmonic analysis
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Integration
Interpolation
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Numeration
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Cobalt coating
Electroplating
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Nickel coating
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Broaching
Cutting machines
Cutting off machines
Cutting tools
Cutting tools, Carbide
Cutting tools, Ceramic
Drilling and boring (metal working, etc.)
Electric cutting
Electrochemical cutting
Grooving
Lubrication and lubricants (cutting and grinding)
Machine tools
Milling
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Oxyacetylene cutting
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Saws, Metal working
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Titanium plating
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Heat treatment
Machine tools
Metal drawing
Metal spinning
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Punching machinery
Rolling (metal work)
Sheet metal work

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Shells (metal work)
Shot peening
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Steel work
Straightening
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Geology
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Steel industry and trade
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Stirrers

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MODEL houses. See Houses, Model

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Airplanes—Model testing
Architectural models
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Chemical models
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Mathematical models
Mechanical models
Mine models
Ship models
Structural engineering—Model testing
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Atoms
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Cotton fabrics—Moisture absorption
Dampness in buildings
Evaporation
Humidity
Hygrometers
Soil moisture
Water vapor

also subdivision Moisture content under special subjects, e.g.

Bricks
Clay
Compressed air
Food, Dried
Gases
Meat
Paper
Sand
Textile fibers
Wood pulp

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Molds (for plastics)
Nylon—Molding
Plastics
Resinous products

Manufacture

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Bearings, Plastic
Gearing, Plastic

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Nylon—Molding

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Better fabrication boosts plastics sales. F. Arne. il Chem Eng 70:78-80+ Jl 22 '63
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Extrusion machines (for plastics)

Maintenance and repair

Clean your own injection cylinders. S. S. Bodner. diag Plastics Tech 9:40-1 F '63

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Combination molding press. Rubber Age 92:312 N '62

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Fungi

Mildew

Myxomycetes

Penicillium

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Boat topics. il Engineering 196:320 S 6 '63

In-line engine makes room for boat passengers. il diag Machine Design 35:6 Ag 15 '63

Molding the finish into Bertram yachts. G. Owens. il Ind Finishing 39:46-8+ My '63

Speedometer and depthmeter for small craft; Hermes. il Engineer 215:680 Ap 12 '63

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Fleet's in plastics; 53d National motor boat show at New York city's Coliseum. il Plastics World 21:30-1 Mr '63

International boat show 9th, London. Engineering 195:96 Ja 18 '63

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Propless Wankel drive. il diags Machine Design 35:96-7 Ja 3 '63

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MOTOR bus engines

Commercial vehicle exhibition; engines. il diags Automobile Eng 52:412-20 N '62

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Infrared lamps melt wintry blasts. il Safety Maint 125:55-6 Je '63

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Terminals

Bus terminal at George Washington bridge. J. M. Kyle and P. G. Nicholson. il plan diag Civil Eng 32:54-7 N '62

Long spans make room for buses; bus terminal, Los Angeles. il Eng N 170:32 F 14 '63

Nervi's bus station opens in New York. il Arch Rec 133:14 F '63

New bridge and bus station to speed Manhattan traffic. il Civil Eng 33:88 Mr '63

New York's uptown bus terminal dedicated. il Prog Arch 44:61 F '63

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Relighted bus terminal; Washington, D.C. il Illum Eng 58:27 Ja '63

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Commercial vehicle exhibition; electrical equipment and heating. il diag Automobile Eng 52:440-5 N '62

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Self-changing gears' RV 28 gearbox. il diags Engineering 196:210-11 Ag 16 '63

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Reinforced plastics in road passenger transport. il Brit Plastics 36:554-7 O '63

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British increase air suspension on buses; seek greater payload in medium trucks. D. Scott. il Automotive Ind 128:53+ Ja 15 '63

Commercial vehicle exhibition; front suspension and steering. il Automobile Eng 52:432-4 N '62

Commercial vehicle exhibition; rear suspension. il Automobile Eng 52:428-32 N '62

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Volvo-Matic, new automatic geared turbine transmission from Sweden. S. O. Kronogard. flow diags il diag S A E J 71:38-43 Ap '63

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History of the steam-driven railcar, 1903-48. R. A. S. Abbott. il Engineer 216:147-52, 188-91, 221-6 Jl 26-Ag 9 '63

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Diesel-electric multiple-unit trains; Southern region of the British railways. il Engineer 214:634 O 12 '62

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Japan's honorable Maverick; Honda keeps things moving. A. Ashburn. il Am Mach/Metalworking Manuf 106:103-5 D 10 '62

Oriental Maverick shows heels to competitors; Honda motor co. Steel 152:50-2 Ja 28 '63

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Ben line cargo ship M.V. Benarty. il Engineer 215:483-4 Mr 15 '63

Brocklebank gets first motorship. il Marine Eng/Log 68:68-9 My '63

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Cat sets sights on truck market. Diesel Equip Supt 41:28-9 Mr '63

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Mack's in-city MB truck. il Diesel Equip Supt 41:24-5 Jl '63

Mack's new V-8 truck Diesel. C. A. Weinert. il Automotive Ind 128:76-7 Ap 15 '63

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Produce haulers go Diesel. il Diesel Equip Supt 41:36-7 O '63

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International Harvester Construction record n/c tool program. J. Geschelin. il Automotive Ind 129:67-72 S 1 '63

Russian automatic line has dual-pitched transfer bars. D. Scott. il Automotive Ind 128:75+ F 15 '63

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Four-way type machine for processing truck carrier housings. il Mach 69:156 D '62

Induction heating of GM castings. il Automotive Ind 128:46-7 Mr 1 '63

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Birth of a truck. J. Geschelin. il Automotive Ind 128:41-3 My 1 '63

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Three new International Harvester truck lines. J. Dunne and C. B. Campbell. il Automotive Ind 128:35-6 F 15 '63

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Steel sandwich tests; floors are stronger, lighter, cheaper. J. Dunne and C. B. Campbell. Automotive Ind 129:47+ Jl 15 '63

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Foremen drive trucksters at port and ship repair yard. il Marine Eng/Log 68:38A O '63
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Meters keep close watch extend battery life of industrial trucks. R. E. Wilson. il Plant Eng 17:134-5 Jl '63
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42-yard over-road haulers; Roy Fruehauf, Five R's construction co. il Roads & Sts 106:105 Mr '63
On-highway trucker invades off-highway construction. il Diesel Equip Supt 40:18-19+ D '62
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Modulated clutch between engine and torque converter features new Twin Disc design. J. B. Black. diags S A E J 71:42-3 S '63

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Automation may elevate future commuters and in-city travelers; Starrcar. il Elec Eng 82:292 Ap '63

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Ear—Protection
Radar—Interference
Radio communication—Interference
Radio communication—Interference elimination
Silencers
Soundproofing
also subdivision Noise under special subjects, e.g.
Air compressors
Air conditioning equipment
Airplanes

NOISE—See also—*Continued*

Airplanes, Jet propelled

Amplifiers

Amplifiers, Transistor

Amplifiers, Vacuum tube

Automobile engines

Automobiles

Boiler plants

Cooling towers

Crystal diodes

Electric fans

Electric motors

Electric transformers

Electronic apparatus and instruments

Gas turbines, Aircraft

Guided missiles

Helicopters

High fidelity sound systems

Machine tools

Machinery

Magnetic tape

Moving picture studios

Oscillators

Power plants

Radar receiving apparatus

Radio apparatus

Radio receiving apparatus

Radio transformers

Railroads

Refrigeration and refrigerating machinery

Rock drills

Saws

Semiconductors

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Kerr effect
Lenses
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Measuring instruments, Optical
Photoelasticity
Photometry
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Radiation
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Crushing machinery
Flotation process
Gold metallurgy
Hydrometallurgy
International mineral processing congress
Iron metallurgy
Leaching
Metallurgical plants
Metallurgy
Sintering
Smelting
Tailings

OREGON

See also subdivision Oregon under special subjects, e.g.

Geology
Hydroelectric plants
Paleogeography
Petroleum
Sewerage

ORES

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Arsenopyrite
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Food packages
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Fruit—Prepackaging
Meat—Prepackaging
Packing for shipment
Vegetables—Prepackaging

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Sealing machines
Wrapping machines

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Aluminum foil
Cellophane
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Seals
Stuffing boxes

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Fruit—Prepackaging

Nylon straps

Rayon straps

Shipment of goods

Steel straps

Vegetables—Prepackaging

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Equipment

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When baking heat is tampered with. N. Gaynes. Ind Finishing 39:74+ Ap '63

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Removal

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Be sure specifications are clearly understood. Ind Finishing 39:80+ S '63

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Watch paint inventory; avoid long storage. K. Schreiber. Ind Finishing 39:74+ My '63

Stripping

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Manufacture

Integrated station type line makes better paint pails faster. R. E. Miller. il diags Mach 69:122-5 N '62

PAINT factories

Equipment

We keep our system simple; Samuel Cabot inc. A. H. Hermann. il diags Mod Materials Handling 18:62-5 S '63

PAINT handling
We keep our system simple; Samuel Cabot inc. A. H. Hermann. il diags Mod Materials Handling 18:62-5 S '63

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See also
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Cloud chambers
Dispersion
Drops
Electrophoresis
Granular materials
Micelles
Pigments
Powders
Sand
Sedimentation
Suspensions

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Great Britain—Patent office

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Chemical patents
Coal patents
Dye patents
Inventions
Metallurgical patents
Patent laws and regulations
Patent searching
Textile patents
United States—Patent office

also subdivision Patents under special subjects, e.g.

Aeronautics
Automobiles
Control equipment
Cosmetics
Drugs
Electronics
Food industry and trade
Glass machinery
Glass manufacture
Hair preparations
Lubrication and lubricants
Machinery
Petroleum industry and trade—Equipment and supplies
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PAVEMENT marking. See Traffic lines

PAVEMENTS

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Bridges—Floors

Streets

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Pavements, Bituminous

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Roads, Bituminous concrete

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Bridges—Floors

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Creep of plastics
Electric circuits—Plastics embedment
Electronic circuits—Plastics embedment
Extrusion process (plastics)
Molded products
Molding
Molding machines (for plastics)
Plastic coating
Plasticizers
Resinous products
Saran
Thermoplastics
Tools, Plastic
Urethans

also subdivision Plastics under special subjects, e.g.

Airplanes—Materials
Automobiles—Materials
Building materials
Guided missiles—Materials
Motor trucks—Materials
Motor vehicles—Materials
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Solar power
Steam
Water power
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Chemical plants
Coal mines and mining
Hospitals
Metallurgical plants
Paper and pulp mills
Petroleum refineries
Steel works

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Factories—Electric equipment
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Belting
Chain gear
Clutches
Compressed air
Couplings
Electric distribution
Electric driving
Electric transmission
Gearing
Hydraulic transmission
Hydrostatics
Joints, Universal
Pneumatic transmission
Power (mechanics)
Servomechanisms
Shafting
Speed variation
Torque converters

also subdivision Transmission under special subjects, e.g.
Automobiles
Motor buses
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Tractors

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Erosion
Floods
Guaire River
Hydraulic engineering
Ice on rivers, lakes, etc.
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Geology
Gneiss
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Laterite
Limestone
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See also
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Dikes (geology)
Diorite
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Lava
Pegmatites

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ROLLER chains. See Chain gear

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Electric protective apparatus
Eye—Protection
Fire protection
First aid in illness and injury
Gas detectors
Goggles
Head—Protection
Inflammable liquids
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Lightning protection
Machinery—Safety devices
Mine rescue work
National safety council
Poisons, Industrial
Presses—Safety devices
Railroads—Signals
Safety at sea
Safety contests and awards
Safety engineering
Safety instructions and training
Safety movement
Safety signs
Safety standards
Safety valves
Traffic lines
Traffic signals

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Air compressors
Airplane factories
Atomic power plants
Automobiles
Aviation
Boiler plants
Building
Chemical laboratories
Chemical plants
Chemicals
Coal mines and mining
Conveying machinery
Cranes, derricks, etc.
Electric equipment
Electric lines
Electric plants (central stations)
Electric tools, Portable
Electric utilities
Explosives
Gas, Natural—Pipe lines
Gas companies
Gas distribution
Highway engineering
Hoisting
Ladders
Liquefied petroleum gas
Loading and unloading
Machine shops
Material handling
Mining engineering
Motor trucks
Motor vehicles
Nuclear reactors
Petroleum industry and trade
Petroleum refineries
Printing offices
Quarries and quarrying
Roads
Rock products plants
Sand and gravel plants
Sewage disposal plants
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Steel works
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Sewage disposal
Sewer cleaning
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Water pollution
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Boston
Cincinnati
Detroit
Hamilton, Ontario
Huntington Beach, California
Lakeland, Florida
Liverpool, Australia
Los Angeles
Marion, Ohio
Milwaukee
Montecito, California
New Orleans
New York (city)
Omaha, Nebraska
Richmond, Indiana
St Louis
St Paul
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Metal drawing
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Pipes
Presses
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Mica
Mullite
Natrolite
Pegmatites
Pumice
Pyroxene
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Government's role and the future of discovery; S.C.I. American section chemical industry medal address. M. Tishler. Chem & Ind p 1632-7 O 12 '63
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70th year of the American section. D. B. Benedict. Chem & Ind p 1293 Ag 10 '63
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SOCIETY of cosmetic chemists
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Annual meeting of the New York chapter, Nov. 7. Am Perfumer 77:48+ D '62
Annual seminar, 10th, Sept. 24-25; abstracts of papers. Am Perfumer 78:120-2+ O '63

SOCIETY of cosmetic chemists—*Continued*

Semi-annual scientific meetings, SCC and TGA, New York, May 8-9; abstracts of papers. Drug & Cosmetic Ind 92:704+ Je '63

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Officers and managers of sections; administrative committees. SMPTE J 72:306-13 Ap '63

Progress committee report for 1962. il maps diags SMPTE J 72:359-406 bibliog(p404-6) My '63

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Semi-annual meeting and exhibit, 94th, Boston, Oct 12-17; program with abstracts of papers. SMPTE J 72:714-18+ S '63

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RETEC section fall meeting, Newark, N.J. Plastics Tech 9:51-2 Ja '63

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See also
Light
Mass spectra
Raman effect
Spectrum analysis
Zeeman effect
also subdivision Spectra under special subjects, e.g.
Carbon monoxide
Ferrates
Gallium arsenide
Garnet
Glucose
Hydrochloric acid
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Spectrum, Infrared—Absorption spectra
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also subdivision Standards under special subjects, e.g.
Air conditioning
Air pipes
Area measurement
Boilers
Bushings
Concrete, Reinforced
Concrete construction
Containers (for shipping)
Control equipment
Drafting room practice
Drugs
Electric equipment
Electric switchgear
Electric transformers
Electric wiring
Electronic apparatus and instruments
Electronic circuits
Electronics
Flanges
Gas, Natural—Pipe lines
Gas pipes
Gas pipes, Plastic
Gearing
Household products
Hydraulic machinery
Hydraulic transmission
Hygiene, Industrial
Insulation (electric)
Lighting
Lightning arresters
Lumber
Machine tools
Machinery
Magnetic tape recording
Moving picture films
Moving picture sound recording
Pallets
Paper
Petroleum—Well tubing
Petroleum pipe lines
Photography
Pipes, Plastic
Piping
Piping (power plants)
Plastics
Plumbing
Pneumatic machinery
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Graphic methods
Interpolation
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Linear programming

STATISTICAL methods—See also—*Continued*
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Export trade
Fertilizer industry
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Imports
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Oil storage
Pattern storage
Racks
Shelving, Steel
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Chemicals
Ethylene, Liquid
Food
Food, Frozen
Fruit
Gas, Natural
Hydrogen peroxide
Liquefied petroleum gas
Machinery
Paint
Paper
Potatoes
Propane
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Bending
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Bridges—Load
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Creep of metals
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See also

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Equation of state
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Heat
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Peltier effect
Radiation
Specific heat
Statistical mechanics
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Transition points
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American concrete institute

American institute of steel construction

American petroleum institute

American society for metals

Georgia textile manufacturers association

International association of printing house craftsmen

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also subdivision Waste under special subjects, e.g.

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Petroleum refineries

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Rolling mills

Steel works

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Commuters
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Ferry bridges
Ferryboats
Freight cars
Highway transportation
Mechanical handling
Mine haulage
Monorail transportation system
Motor trucks
Motor vehicles
Ore transportation
Packing for shipment
Ports
Railroads
Rapid transit
River traffic
Steamboat lines

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Coal
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Fir
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Architecture
Geology
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Petroleum
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Air filters
Air pollution
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Cooling
Dust removal
Electric fans
Exhaust systems
Fans, Mechanical
Mine ventilation

also subdivision Heating and ventilation under special subjects, e.g.
Air raid shelters
Airplanes
Apartment houses
Atomic research laboratories
Automobiles
College buildings
Factories

VENTILATION—See also—*Continued*
Foundries
Garages
Greenhouses
Hospitals
Laboratories
Library buildings
Machine works
Motels
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Filters and filtration
Filtration plants
Fire service (water supply)
Hot water supply
Pumping stations
Reservoirs
Water, Underground
Water conservation
Water consumption
Water distribution
Water purification
Water storage
Water supply engineering
Water tanks
Watersheds
Waterworks
Wells
also subdivision Water supply under names of places, e.g.
Alderwood Manor, Washington
Austin, Texas
Buckeye, Arizona
Burley, Idaho
Carmichael, California
Chicago
Coronado, California
Dallas
Detroit
Devils Lake, North Dakota
Dortmund, Germany
El Dorado Hills, California
Elgin, Illinois
Elmore, Ohio
Fairbury, Nebraska
Fairfax, Virginia
Grand Rapids, Michigan
Greeley, Colorado
Highland Park, Illinois
Kansas City, Missouri
Lima, Ohio
London
Los Angeles
Louisville, Kentucky
Lowell, Massachusetts
Manchester, England
Mexico (city)
Miami, Florida
Millville, Pennsylvania
Milwaukee

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Nebraska City, Nebraska
New Haven, Connecticut
Oakland, Maryland
Oklahoma City
Oshkosh, Wisconsin
Penfield, New York
Philadelphia
Pomona, California
Portland, Oregon
Puyallup, Washington
Rawlins, Wyoming
Richfield, Minnesota
Rio de Janeiro
San Antonio, Texas
San Diego
San Francisco
Seattle
Stamford, Connecticut
Tampa, Florida
Taylorville, Illinois
Tierra Verde City, Florida
Tokyo
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Beryllium
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Niobium
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